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SUPPLEMENT No. 5.
TO THE TENTH ANNUAL REPORT OF THE
MINISTER OF MARINE AND FISHERIES,
FOR THE YEAR, 1877.

REPORT

OF THE



COMMISSIONER OF FISHERIES

FOR THE YEAR ENDING 31ST DECEMBER,

1877.



OTTAWA:

PRINTED BY MACLEAN, ROGER & CO., WELLINGTON STREET.
1878.

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REPORT OF THE COMMISSIONER OF FISHERIES.

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THE FISHERIES OF CANADA.

ANNUAL REPORT

OF

W. F. WHITCHER, Esq.,

Commissioner of Fisheries.

DEPARTMENT OF MARINE AND FISHERIES,

Fisheries Branch,

OTTAWA, 31st December, 1877.

To the Hon. A. J. SMITH,

Minister of Marine and Fisheries.

SIR,—The next following tables show the quantity and value of various kinds of fish caught in the different Provinces of the Dominion during the past year. It is satisfactory to note that in yield and value the Canadian fisheries are still improving. Compared with last year their produce is valued at above half a million of dollars more. In 1876 it was worth \$11,147,590; and in 1877 it is valued at \$12,029,957. This exceeds the previous year by \$882,367. Succeeding tables, extending over a series of years, establish the gratifying fact that this improvement is not casual or spasmodic, but is gradual and permanent. When it is considered that fisheries in all parts of the world are subject to serious and various fluctuations which injuriously affect their average productiveness whilst those of Canada, although exposed to like

changes, have steadily progressed of late years, we may congratulate ourselves on their being re-established as a source of great and lasting wealth to the whole country. It was the unfortunate custom formerly to chronicle the yearly decline of the fisheries, relieved somewhat by occasional signs of recovery. The reverse is now most fortunately the case. This improvement is certainly not altogether due to measures adopted for their protection and development; but it is remarkably coincident with those endeavours to preserve the fisheries from further deterioration. There are, doubtless, many things still required to perfect the service. The encouragement afforded by the actual condition of the fisheries will, it is hoped, remove any obstacles to remedying existing defects.

EXPORTATION OF FISH.

Other statements herewith show the extent of the fish trade of Canada. These statements are obligingly furnished by the Department of Customs. Corresponding with increased production, there is an increased foreign trade in the produce of the fisheries. The value of fish exported in 1877 was \$7,000,402; being \$1,462,381 over the exports of 1876. The value of fish exported during the last six months of this year exceeds that of last year's exports by \$1,118,521. About fifty per cent of all these exports went to United States markets.

IMPORTATION OF FISH.

The value of fish imported into Canada during the year 1877 is \$1,329,530. About seventy per cent of these imports came from the United States.

FRESH FISH TRADE.

Increasing facilities for the conveyance of fish in a fresh state lead to a considerable increase in this branch of the fishing business, both between the Provinces and between the Dominion and Great Britain.

COMPARATIVE STATEMENT
Of Production in each Branch of Fishing within the respective Provinces
of the Dominion of Canada, in 1876 and 1877.
PROVINCE OF NOVA SCOTIA.

Kinds of Fish.	1876.		1877.	
	Quantities.	Value.	Quantities.	Value.
Codfish.....	509,968 cwt.	\$ 2,549,840 00	469,728 cwt.	\$ 1,996,344 00
Herrings.....	165,142½ brls.	630,570 00	113,093 brls.	452,392 00
do smoked.....	51,310 boxes.	12,827 50	28,780 boxes.	7,195 00
Mackerel.....	70,964 brls.	709,640 00	113,638½ brls.	1,136,385 00
do preserved.....	30,820 cans.	4,623 00	125,036 cans.	18,755 40
Haddock.....	13,679,214 lbs.	820,752 84	118,635½ cwt.	415,224 25
Pollack.....	34,852 cwt.	121,982 00	33,820 " "	118,370 00
Hake.....	25,955 "	90,842 50	29,435½ "	103,024 25
Halibut.....	941,200 lbs.	56,472 00	688,060 lbs.	40,083 60
Salmon, pickled.....	1,369½ brls.	24,651 00	950¾ brls.	14,261 25
do fresh, in ice.....	475,304 lbs.	71,295 60	420,919 lbs.	63,137 85
do smoked.....	30,118 "	4,517 70	17,910 "	2,686 50
do preserved.....	30,820 cans.	4,623 00	48,715 cans.	7,307 25
Alewives.....	7,611 brls.	26,638 50	5,433 brls.	19,015 50
Trout.....	77,940 lbs.	4,676 40	65,645 lbs.	3,938 70
Smelts.....	431,625 "	25,897 50	313,302 "	18,798 12
Shad.....	5,577½ brls.	44,620 00	4,536 brls.	36,288 00
Eels.....	1,723 "	15,507 00	1,501 "	13,509 00
Bass.....	8,055 lbs.	483 30	1,275 lbs.	76 50
Oysters.....	1,040 brls.	3,120 00	980 brls.	2,940 00
Lobsters.....	3,348,720 cans.	502,308 00	4,982 026 cans.	747,303 90
Fish Guano.....	1,383½ tons.	20,752 50	531 tons.	7,965 00
Fish used as manure.....	3,291 brls.	1,645 50	9,779 brls.	4,889 50
Cod Tongues and Sounds.....	868 "	6,076 00	905 "	6,335 00
Fish Oils.....	345,674 gallons.	224,688 10	337,170 gallons.	219,160 50
Fresh Fish, sold in Halifax fish market.....		20,000 00		25,000 00
Fresh Fish, sold in Inverness County.....				36,297 30
Fresh Fish, sold in Lunenburg County.....				11,175 00
		6,029,049 94		5,527,858 37

PROVINCE OF NEW BRUNSWICK.

Codfish.....	66,374 cwt.	331,870 00	68,209 cwt.	\$ 289,888 25
Herrings.....	133,117 brls.	532,463 00	120,158 brls.	480,632 00
do smoked.....	497,008 boxes.	124,252 00	519,725 boxes.	129,931 25
Mackerel.....	3,034 brls.	30,340 00	4,472 brls.	44,720 00
do preserved.....	1,800 cans.	270 00	65,040 cans.	9,756 00
Haddock.....	1,333,550 lbs.	83,613 00	14,690 100 cwt.	51,416 05
Pollack.....	13,154 cwt.	46,039 00	24,926 "	87,241 00
Hake.....	32,415 "	113,452 50	40,590 "	142,065 00
Halibut.....	73,300 lbs.	4,398 00	121,200 lbs.	7,272 00
Salmon, pickled.....	861 brls.	15,498 00	353 brls.	5,340 00
do fresh, in ice.....	671,027 lbs.	100,654 05	1,348,007 lbs.	202,201 05
do smoked.....	49,000 "	7,350 00	62,350 "	9,352 50
do preserved.....	113,200 cans.	16,980 00	111,740 cans.	16,761 00
Alewives.....	19,229 brls.	67,301 50	9,135 brls.	45,675 00
Trout.....	62,180 lbs.	3,730 80	56,338 lbs.	3,380 28
Smelts.....	1,559,200 "	93,552 00	1,950,700 "	117,042 00
Shad.....	4,870 brls.	38,960 00	4,838 brls.	38,704 00
Eels.....	1,096 "	9,864 00	1,367½ "	12,307 50
Bass.....	288,859 lbs.	17,331 51	228,954½ lbs.	13,737 24
Oysters.....	7,911 brls.	23,733 00	7,738 brls.	23,214 00
Lobsters, preserved.....	1,416,357 cans.	212,453 55	1,988,974 cans.	298,346 10
Fish Guano.....	869 tons.	13,035 00	890 tons.	13,350 00
Fish used as manure.....	5,196 brls.	2,593 00	5,951 brls.	2,975 50
Cod Tongues and Sounds.....	75 "	525 00	1,291½ "	9,061 50
Fish Oils.....	97,107 gallons.	63,119 55	121,335 gallons.	78,867 75
		1,953,388 49		2,133,236 97

COMPARATIVE STATEMENT—Continued.

PROVINCE OF QUEBEC.

Kinds of Fish.	1876.		1877.	
	Quantities.		Value.	Quantities.
		\$ cts.		\$ cts.
Summer Cod-fishing.....	185,165 qntls.	925,825 00	225,816 qntls.	1,129,080 00
Autumn do	40,931 do	204,655 00	37,626 do	188,130 00
Herrings, pickled	105,454 brls.	421,816 00	73,924 brls.	358,925 50
do smoked.....	832 boxes.	208 00	700 boxes.	175 00
do fresh-water.....	6½ brls.	32 50	25 brls.	125 00
Mackerel	4,975 do	49,750 00	5,343½ do	53,435 00
do preserved in cans			960 lbs.	144 00
Haddock	347 qntls.	1,735 00	248 qntls.	1,240 00
Ling	1,149 do	5,745 00	99 do	495 00
Halibut	183 brls.	1,093 00	227½ brls.	1,365 00
Salmon, pickled	2,216 do	35,456 00	2,232½ do	26,790 00
do fresh in ice	267,276½ lbs.	13,363 83	326,548 lbs.	16,327 40
do	8,421 pieces.	8,421 00	8,806 pieces.	8,806 00
do smoked.....	1 box.	4 00	1 box.	4 00
do preserved in cans	50,901 lbs.	7,635 15	100,605 lbs.	15,090 75
Winnonish.....	3,000 pieces.	750 00	3,290 pieces.	822 50
Trout (sea)	163½ brls.	1,308 00	276½ brls.	2,217 00
do speckled and grey.....	447,200 lbs.	35,566 00	458,740 lbs.	36,687 20
Sturgeon.....	559½ brls.	4,476 00	617½ brls.	4,940 00
Bar and Whitefish.....	10,209 doz.	20,418 00	10,539 doz.	21,078 00
Bar Fish			2,642 pieces.	1,321 00
Shad.....	142,405 pieces.	14,240 50	52,617 do	5,264 70
Sardines	1,830½ brls.	9,152 50	8,130 brls.	40,650 00
Eels.....	47 do	470 00	23 do	230 00
do	291,737 pieces.	29,173 70	282,744 pieces.	28,274 40
Bass.....			525 brls.	5,250 00
Pike.....	400 brls.	4,000 00	775 do	7,750 00
Pickerel	695 do	6,950 00	1,870½ do	18,705 00
Tom Cod	22,000 bush.	11,000 00	20,000 bush.	10,000 00
Tunny			2 brls.	10 00
Small and mixed Fish	3,015 brls.	1,507 50	6,313 do	3,156 50
Other Fish		500 00		
Mixed Fish	19,530 brls.	97,650 00	16,778 brls.	83,890 00
Maskinonge	617 pieces.	1,234 00	767 pieces.	1,534 00
Shark.....			40 do	240 00
Seal Skins	9,915 pieces.	12,393 75	14,612 do	18,265 00
Porpoise Skins	212 do	848 00	137 do	548 00
Lobsters, preserved in cans.....	245,335 lbs.	36,800 25	450,669 lbs.	67,600 35
Lobsters, fresh			5,000 do	250 00
Fish and Clams used as bait and manure.....	74,640 brls.	32,700 00	206,649 brls.	187,850 25
Fish used for local consumption.....			11,554½ do	46,218 00
Cod Tongues and Sounds	177 brls.	1,593 00	234 do	2,106 00
Seal Oil.....	55,126 galls.	27,563 00	73,560 galls.	36,780 00
Whale Oil	9,618 do	4,809 00	13,716 do	6,858 00
Porpoise Oil	9,610 do	7,684 00	11,188 do	8,950 40
Cod Oil	118,271 do	59,135 50	225,129 do	112,564 50
		2,697,637 18		2,560,147 45

COMPARATIVE STATEMENT—Continued.

PROVINCE OF ONTARIO.

Kinds of Fish.	1876.			1877.		
	Quantities.		Value.	Quantities.		Value.
						\$ cts.
Whitefish.....	11,999	brels.	119,990 00	7,776	brels.	77,760 00
do	1,052,490	lbs.	52,624 50	1,876,300	lbs.	93,815 00
do	471,402	pieces.	47,140 20	301,050	pieces.	30,105 00
Trout	11,744	brels.	117,440 00	12,526	brels.	125,260 00
Herrings.....	10,781 $\frac{1}{2}$	do	53,907 50	10,288	do	51,440 00
Sciscos.....	316	do	1,580 00	1,505	do	7,525 00
Maskinonge	641 $\frac{1}{2}$	do	3,207 50	786 $\frac{1}{2}$	do	3,932 50
Bass.....	879 $\frac{1}{2}$	do	4,397 50	1,624 $\frac{1}{2}$	do	8,122 50
Pike	680 $\frac{1}{2}$	do	3,402 50	995 $\frac{1}{2}$	do	4,977 50
Pickerel	2,300	do	11,500 00	2,931 $\frac{1}{2}$	do	14,657 50
Coarse Fish	5,510	do	22,040 00	5,157	do	20,628 00
			437,229 70			438,223 00

PROVINCE OF PRINCE EDWARD ISLAND.

Codfish.....	27,273	cwt.	115,910 25	13,590	cwt.	57,757 50
Herrings.....	14,866	brels.	37,165 00	9,493	brels.	37,972 00
Mackerel	25,383	do	203,064 00	40,462	do	404,620 00
Haddock	336	lbs.	20 16	129,048	lbs.	7,742 88
Hake.....	14,862	cwt.	52,017 00	7,429	cwt.	26,001 50
Salmon, pickled.....	63	brels.	1,134 00	30	lbs.	450 00
do fresh in ice	2,000	lbs.	300 00	9,440	lbs.	1,416 00
do preserved.....	1,000	cans.	120 00			
Alewives.....	630	brels.	2,310 00	745	brels.	2,607 50
Halibut.....				200	lbs.	12 00
Trout.....	7,600	lbs.	456 00	33,700	do	2,022 00
Smelets				2,200	do	132 00
Bass.....	6,000	lbs.	360 00	2,200	do	132 00
Eels				17	brels.	153 00
Oysters	7,905	brels.	23,715 00	20,850	do	62,550 00
Lobsters, preserved.....	362,676	cans.	43,521 12	663,900	cases.	99,585 00
Cod Tongues and Sounds				233 $\frac{1}{2}$	brels.	1,634 50
Fish Oils	594	brels.	4,158 00			
Fish used for local con-	16,487	galls.	10,716 55	8,074	galls.	5,248 10
sumption in the Coun-						
ties of Prince and						
Kings						53,000 00
			494,967 08			763,035 98

PROVINCE OF MANITOBA.

Whitefish.....	73,535	pieces.	3,676 75	111,820	pieces.	8,945 60
Sturgeon.....	600	do	3,000 00	670	do	3,350 00
Gold Eyes	481,200	do	9,624 00	73,000	do	1,460 00
Perch, Bass and Suckers.	46,500	do	1,395 00			
Pike	37,900	do	1,895 00	5,750	pieces.	287 50
Catfish.....	55,000	do	11,000 00			
Catfish and Suckers.....				45,000	pieces.	9,000 00
Coarse fish.....				19,600	do	980 00
			30,090 75			24,023 10

COMPARATIVE STATEMENT—*Continued.*
PROVINCE OF BRITISH COLUMBIA.

Kinds of Fish.	1876.		1877.	
	Quantities.	Value.	Quantities.	Value.
		\$ cts.		\$ cts.
Salmon, pickled	*1,140 brls.	6,609 00	3,561 brls.	28,488 00
do preserved in cans	*499,824 lbs.	72,164 00	3,234,576 lbs.	436,667 76
do smoked				600 00
Herrings, pickled			263 brls.	2,104 00
do smoked				1,200 00
Haddock do				100 00
Sturgeon, preserved in cans			1,000 lbs.	125 00
Mixed Fish, other than Salmon	*165 brls.	900 00	50 brls.	300 00
Seal Skins			5,700 pieces.	25,650 00
Dog-fish, Seal and Porpoise Oil			115,495 gallons.	46,198 00
Oolahan Oil			10,000 do	10,000 00
Fish Oils	*50,124 gallons.	25,024 00		
Fresh Fish sold on markets				30,000 00
Fish cured for home consumption				2,000 00
		104,697 00		583,432 76

*These figures are taken from Custom House Returns of Exports.

GENERAL RECAPITULATION of the Yield and Value of the Fisheries

Kinds of Fish.	Nova Scotia.		New Brunswick.		Quebec.	
	Quantities.	Value.	Quantities.	Value.	Quantities.	Value.
	cts.		cts.		cts.	
Codfish..... cwt.	463,728	1,996,344 00	63,209	289,888 25	.....	.....
do qntls.	.....	.....	.....	.....	263,442	1,317,210 00
Herrings, pickled..... brls.	113,098	452,392 00	120,158	480,632 00	73,924	358,925 50
do smoked..... boxes.	28,780	7,195 00	519,725	129,931 25	700	175 00
do do value.....	.....	.....	.....	.....	.....	.....
do fresh water..... brls.	.....	.....	.....	.....	25	125 00
Sciscos do ".....	.....	.....	.....	.....	.....	.....
Mackerel..... "	113,6383	1,136,385 00	4,472	44,720 00	5,343½	53,435 00
do preserved in cans lbs.	125,036	18,755 40	65,040	9,756 00	960	144 00
Haddock..... cwt.	118,635½	415,224 25	14,619 ³⁰ ₀₀	51,416 05	.....	.....
do qntls.....	.....	.....	.....	.....	248	1,240 00
do lbs.....	.....	.....	.....	.....	.....	.....
do smoked value.....	.....	.....	.....	.....	.....	.....
Ling..... qntls.	.....	.....	.....	.....	99	495 00
Pollack..... cwt.	33,820	118,370 00	24,926	87,241 00	.....	.....
Hake..... "	29,435½	103,024 25	40,590	142,065 00	.....	.....
Halibut..... lbs.	663,060	40,083 60	121,200	7,272 00	.....	.....
do brls.	.....	.....	.....	.....	227½	1,365 00
Salmon, pickled..... "	950½	14,261 25	356	5,340 00	2,232½	26,790 00
do fresh, in ice..... lbs.	420,919	63,137 85	1,348,007	202,201 05	326,548	16,327 40
do pieces.....	.....	.....	.....	.....	8,806	8,806 00
do smoked..... lbs.	17,910	2,686 50	62,339	9,352 50	.....	.....
do do value.....	.....	.....	.....	.....	.....	.....
do boxes.....	.....	.....	.....	.....	1	4 00
do preserved in cans lbs.	48,715	7,307 25	111,740	16,761 00	100,605	15,090 75
Alewives..... brls.	5,433	19,015 50	9,135	45,675 00	.....	.....
Trout..... lbs.	65,645	3,938 70	56,338	3,380 28	.....	.....
do sea..... brls.	.....	.....	.....	.....	276½	2,212 00
do speckled and grey.. lbs.	.....	.....	.....	.....	458,740	36,687 20
do do brls.	.....	.....	.....	.....	.....	.....
Winnonish..... pieces	.....	.....	.....	.....	3,290	822 50
Sturgeon..... brls.	.....	.....	.....	.....	617½	4,940 00
do pieces.....	.....	.....	.....	.....	.....	.....
do preserved in cans lbs.	.....	.....	.....	.....	.....	.....
Bar and Whitefish..... doz.	.....	.....	.....	.....	10,539	21,078 00
Ear Fish..... pieces	.....	.....	.....	.....	2,642	1,321 00
Whitefish..... brls.	.....	.....	.....	.....	.....	.....
do lbs.....	.....	.....	.....	.....	.....	.....
do pieces.....	.....	.....	.....	.....	.....	.....
Shad..... brls.	4,536	36,288 00	4,838	38,704 00	.....	.....
do pieces.....	.....	.....	.....	.....	52,647	5,264 70
Sardines..... brls.	.....	.....	.....	.....	8,130	40,650 00
Gold Eyes..... pieces	.....	.....	.....	.....	.....	.....
Eels..... brls.	1,501	13,519 00	1,367½	12,307 50	23	230 00
do pieces.....	.....	.....	.....	.....	282,744	28,274 40
Pike..... brls.	.....	.....	.....	.....	775	7,750 00
do pieces.....	.....	.....	.....	.....	.....	.....
Pickerel..... brls.	.....	.....	.....	.....	1,870½	18,705 00
Bass..... "	.....	.....	.....	.....	525	5,230 00
do lbs.....	1,275	76 50	228,954	13,737 24	.....	.....
Maskinonge..... brls.	.....	.....	.....	.....	767	1,534 00
do pieces.....	.....	.....	.....	.....	.....	.....
Coarse Fish..... brls.	.....	.....	.....	.....	.....	.....
do pieces.....	.....	.....	.....	.....	.....	.....
Smelts..... lbs.	313,302	18,793 12	1,950,700	117,042 00	6,313	3,156 50
Small and Mixed Fish..... brls.	.....	.....	.....	.....	.....	.....
Catfish and Suckers..... pieces	.....	.....	.....	.....	.....	.....

within the Dominion of Canada for the Year 1877.

Ontario.		Prince Edward Island.		Manitoba.		British Columbia.		Total.	
Quantities.	Value.	Quantities.	Value.	Quantities.	Value.	Quantities.	Value.	Quantities.	Value.
\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.	
		13599	57,757 50					551527	2,243,989 75
		9493	37,972 00			263	2,104 00	263442	1,317,210 00
								316936	1,332,025 50
								549205	137,301 25
							1,200 00		1,200 00
10,288	51,440 00							10313	51,565 00
1,505	7,525 00							1505	7,525 00
		40462	404,620 00					163916	1,639,160 00
								191036	28,655 40
								133325 ⁸⁰ ₁₀₀	466,640 30
							248		1,240 00
		129048	7,742 88					129048	7,742 88
							100 00		100 00
								99	495 00
								58746	205,611 00
		7429	26,001 50					77454 ₁₂	271,090 75
		200	12 00					789460	47,367 60
								227 ₁₂	1,365 00
		3)	450 00			3561	28,488 00	7130 ₁₄	75,329 25
		9140	1,416 00					210491 ₁₄	283,082 30
								8806	8,806 00
								80260	12,039 00
							600 00		600 00
								1	4 00
						3234576	436,667 76	3195636	475,826 76
		745	2,607 50					15313	67,298 00
		33700	2,022 00					155683	9,340 98
								276 ₁₂	2,212 00
								458740 ₂	36,687 20
12526	125,260 00							12526	125,260 00
								3290	822 50
				670	3,350 00			617 ₁₂	4,940 00
								670	3,350 00
						1000	125 00	1000	125 00
								10539	21,078 00
								2642	1,321 00
								7776	77,760 00
7776	77,760 00							1876300	93,815 00
1876300	93,815 00							412870	39,050 60
301050	30,105 00			111820	8,915 60			9374	74,992 00
								52647	5,264 70
								8130	40,650 00
				73000	1,460 00			7300	1,460 00
		17	153 00					2908 ₁₂	23,199 50
								282744	28,274 40
995 ₁₂	4,977 50			5750	287 50			1770 ₁₂	12,727 50
								5750	287 50
2931 ₁₂	14,637 50							4802	33,362 50
1624 ₁₂	8,122 50							2149 ₁₂	13,372 50
		2200	132 00					232429	13,945 74
786 ₁₂	3,932 50							786 ₁₂	3,932 50
								767	1,534 00
5157	20,628 00			19600	980 00			5157	20,628 00
		2200	132 00					19600	980 00
				45000	9,000 00			2266202	135,972 12
								6313	3,156 59
								45000	9,000 00

GENERAL RECAPITULATION of the Yield and Value of the Fisheries

Kinds of Fish.	Nova Scotia.		New Brunswick.		Quebec.	
	Quantities.	Value.	Quantities.	Value.	Quantities.	Value.
	\$	cts.	\$	cts.	\$	cts.
Tom Cod	bush.				20,000	10,000 00
Tunny.....	brls.				2	10 00
Mixed Fish.....	"				16,778	83,890 00
Oysters.....	"	2,940 00	7,738	23,214 00		
Lobsters, preserved in cans	lbs.	4,982,026	747,303 90	1,988,974	298,346 10	450,669
Lobsters, fresh.....	"					5,000
Cod Tongues and Sounds brls.	905	6,335 00	1,294½	9,061 50	234	2,106 00
Fresh Fish sold in markets, value		72,472 30				
Fish used for local consumption	brls.				11,554½	46,218 00
Fish used for local consumption	value.					
Fish Guano	tons.	531	7,965 00	890	13,350 00	
Fish and Clams used as bait and manure	brls.	9,779	4,889 50	5,951	2,975 50	206,649
Seal Skins	pieces				14,612	18,265 00
Porpoise Skins	"				137	548 00
Shark.....	"				40	240 00
Cod Oil.....	galls.				225,129	112,564 50
Seal Oil	"				73,560	36,780 00
Whale Oil.....	"				13,716	6,858 00
Porpoise Oil.....	"				11,188	8,950 40
Dogfish, Seal and Porpoise Oil	"					
Oolâhan Oil	"					
Fish Oils.....	"	337,170	219,160 50	121,335	78,867 75	
Total value.....		5,527,858 37		2,133,236 97		2,560,147 45

within the Dominion of Canada, for the Year 1877.—Concluded.

Ontario.		Prince Edward Island.		Manitoba.		British Columbia.		Total.	
Quantities.	Value.	Quantities.	Value.	Quantities.	Value.	Quantities.	Value.	Quantities.	Value.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
20850	62,550 00					50	300 00	20000	10,000 00
663900	99,585 00							16828	10 00
2332	1,634 50							29568	81,190 00
									88,704 00
								8085569	1,212,835 35
								5000	250 00
								2697	19,137 00
									102,472 30
								115541	46,218 00
									55,000 00
								1421	21,315 00
								222379	195,724 25
						5700	25,650 00	20312	43,915 00
								137	548 00
								40	240 00
								225129	112,564 50
								73560	36,780 00
								13716	6,858 00
								11188	8,950 40
								115495	46,198 00
						10000	10,000 00	115495	10,000 00
								466579	46,198 00
8074	5,248 10								303,276 35
438,223 00		763,035 98		24,023 10		583,432 76			\$12,029,957 63

Total value of the Fisheries within the Dominion of Canada in 1877..... \$12,029,957 63
 do do do 1876 11,147,590 14

Total increase..... \$882,367.49

TABLE of the Aggregate Quantities and Values of Fish, the Produce of Canadian Fisheries, in the Provinces of Nova Scotia, New Brunswick, Quebec and Ontario, from 1869 to 1877, and in Prince Edward Island, since its entry into Confederation in 1874.

Compiled from Departmental Fishery Reports for the above-named Years.

Kinds of Fish.	1869.			1870.			1871.			1872.			1873.		
	Quantity.	\$	cts.	Quantity.	$	cts.	Quantity.	$	cts.	Quantity.	$	cts.	Quantity.	\$	cts.
Codfish.....Cwt. and Qntls.	510,336	1,690,441	00	512,672	2,217,777	00	671,437	2,573,271	00	824,411	3,490,192	00	880,834	3,763,617	75
do .....Brls.	2,340	5,850	00	1,566	3,132	00	1,566	3,132	00	1,118,785	3,075,045	00	1,193,410	3,130,271	50
Herring	296,921	944,131	00	379,824	1,301,943	00	277,958	1,018,785	00	606,705	1,611,677	00	521,086	1,301,271	50
do smoked	169,879	112,327	25	12,435	1,833	75	1,833	75	1,833	1,833	75	1,833	75	1,833	75
do do	42,219	6,400	00	6,400	6,400	00	6,400	6,400	00	6,400	6,400	00	6,400	6,400	00
do fresh	5,055	20,220	00	6,550	32,752	50	5,875	26,377	50	6,974	41,844	00	7,348	29,392	00
Mackerel	51,011	530,110	00	92,183	1,092,638	00	140,305	1,349,682	00	119,439	1,665,110	00	150,404	1,504,040	00
do	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00
do presrvd. in cans.	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00
Haddock	2,086	8,344	00	.....	.....	.....	3,813	11,439	00	50,500	6,060	00	10,812	1,626	30
do	1,372	6,860	00	1,747	7,895	00	1,747	7,895	00	1,747	7,895	00	1,747	7,895	00
do Brls.	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00
do Lbs.	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00
do No.	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00
Hailbut .....	.....	.....	.....	1,764	10,354	00	1,764	10,354	00	14,340	28,000	00	5,497	27,485	00
do	1,051	5,845	00	1,051	1,051	00	1,051	1,051	00	1,051	1,051	00	1,051	1,051	00
do Brls.	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00
do Lbs.	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00	1,000	1,000	00
Pollack	8,767	26,301	00	560	1,650	00	560	1,650	00	20,180	60,540	00	8,203	139,550	00
do	1,410	4,935	00	1,410	1,410	00	1,410	1,410	00	1,410	1,410	00	1,410	1,410	00
Hake	200	2,000	00	200	2,000	00	200	2,000	00	200	2,000	00	200	2,000	00
Flounders	7,662	100,320	00	7,662	100,320	00	12,613	201,633	50	7,675	80,073	00	7,722	134,912	00
do in ice.	19,341	19,341	00	19,341	19,341	00	19,341	19,341	00	19,341	19,341	00	19,341	19,341	00
do fresh	19,341	19,341	00	19,341	19,341	00	19,341	19,341	00	19,341	19,341	00	19,341	19,341	00
do smoked	852	852	00	852	852	00	852	852	00	852	852	00	852	852	00
do do	852	852	00	852	852	00	852	852	00	852	852	00	852	852	00
do presrvd. in cans.	784,790	198,097	50	784,790	198,097	50	575,517	132,779	00	100,991	25,247	00	84,106	1,300,981	00

Trout	Brls.	148	1,485 00	245	2,246 00	209	2,090 00	407	3,766 00	99	990 00
do	Lbs.	11,692	31,056 00	29,242	137,347 00	28,970	1,738 00	34,708	104,124 00	183,147	10,988 82
Alewives	Brls.	6,188	18,564 00	11,497	98,192 00	35,225	84,702 00	52,324	6,938	42,787	149,754 50
Shad	No.	73,601	5,495 56	16,249	1,624 90	26,359	2,635 90	6,000	55,504 00	7,508	60,064 00
do	Brls.	553	4,424 00	1,060	8,480 00	300	6,000 00	68,060	8,960	152,320 00	1,963 00
Finnan Haddies	Brls.	109,935	10,993 50	133,033	13,303 30	3,806	137,158	13,715 80	10,845 90	5,989	53,901 00
Eels	No.	247,139	149,264 00	99,513	323,795 07	343,965 90	119,539	343,965 90	1,035	160,543	16,054 00
do	Bass	300	3,000 00	20,175	1,210 00	143,731	8,623 00	4,653 00	426,947	731	3,655 00
do	Brls.	221	1,106 00	263	1,315 00	350	1,750 00	2,920	12,410 00	426,947	25,616 82
do and Perch	Tons.	62	7,440 00	820	3,280 00	485,100	19,106 00	39,450 00	24,820	74,460 00	81,864 00
Sinels	Brls.	390	1,562 00	1,120,000	126,000 60	24,038 30	13,150	61,122	56,084 00	4,452 00	778
Mixed Fish	Brls.	7,500	8,767 00	551	2,204 00	4,356	8,712 00	3,161	1,113	1,113	3,112 00
Gaspereaux	Qntls.	3,022	15,110 00	71	355 00	16	80 00	27	135	8	40 00
Ling	Brls.	do	do	do	do	do	do	do	do	do	do
Lunge	No.	do	do	do	do	do	do	do	do	do	do
Winnoniche	Brls.	do	do	do	do	do	do	do	do	do	do
Toulnadi	No.	do	do	do	do	do	do	do	do	do	do
Seicos	do	do	do	do	do	do	do	do	do	do	do
Trout, speckled and grey	Lbs.	do	do	do	do	do	do	do	do	do	do
do	Brls.	7,253	58,024 00	10,396	83,168 00	7,477	59,816 00	7,536	60,683 00	9,188	73,504 00
Sturgeon	Doz.	369	1,845 00	219	1,095 00	4,356	1,555 00	2,040	10,200 00	391	1,905 00
Bar Fish	No.	327	655 66	6,359	12,718 00	8,712 00	3,161	6,322 00	24,756	49,512 00	
Sardines	Brls.	10,736	53,682 50	6,871	34,355 00	1,649	8,245 00	1,791	8,955 00	870	4,350 00
Whitefish	Lbs.	13,620	95,340 00	14,973	104,814 50	13,317	93,219 00	17,940	143,520 00	16,453	131,624 00
do	No.	do	do	do	do	do	do	do	do	do	do
Pike	Brls.	585	2,925 00	1,267	7,605 00	521	3,126 00	834	4,110 00	1,248	2,180 00
Pickerel	Bush.	745	3,725 00	880	4,402 50	295	1,475 00	1,081	6,486 00	1,065	6,240 00
Tom Cod	Bass	do	do	do	do	do	do	do	do	do	do
Pike and Bass	Brls.	do	do	do	do	do	do	do	do	do	do
Sunall and Mixed Fish	do	do	do	do	do	do	do	do	do	do	do
Fish used for local consumption	do	Value.	do	do	do	do	do	do	do	do	do
Maskinonge	Brls.	3	46 00	104	1,190 50	110	900 00	8	104 00	143	1,430 00
do	No.	do	do	40,981	245,886 00	9,042	54,252 00	8,655	51,930 00	12,816	76,896 00
Seal Skins	No.	do	do	do	do	do	do	do	do	do	do
Porpoises	No.	do	do	do	do	do	do	do	do	do	do
Porpoise Skins	No.	do	do	do	do	do	do	do	do	do	do
Sharks	No.	do	do	do	do	do	do	do	do	do	do

TABLE of the Aggregate Quantities and Values of Fish, the Produce of Canadian Fisheries, &c.—Continued.
Compiled from Departmental Fishery Reports for the above-named Years—Continued.

Kinds of fish.	1869.		1870.		1871.		1872.		1873.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Tunny.....Brls.....	2	\$ 10.00	10,00	4,726 ²	28,359.00	47	235.00	2,325	9,513.00	2,806
Coarse Fish.....".....	1,269	7,614.00	591,300	92,575.00	1,130,000	785 ²	4,713.00	882,633	863.00	1,214,749.50
Lobsters, presd. in cansLbs."	61,100	15,275.00	.....	.....	282,500	00	3,565,863	.....	.....	4,864,398
do presd. fresh.....Cases. ...."	.....	.....	135	945.00	.....	.....	7,433	52,031.00	6,275	43,925.00
Cod Tongues and SoundsBrls."	287	2,009.00	230	1,380.00	2,198	336	2,437.00	22,652.00	.....	.....
Fish Roes.....".....	443	5,316.00	970	9,700.00	900	18,000.00	18,000.00	.....	11,070.00	804 ²
Pumice .....Tons."	453	9,060.00	.....	.....	.....	738	.....	.....	.....	12,067.50
Fish Guano.....".....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fish and Orams used as bait and manure.....Brls."	41,642	10,410.50	32,490	8,122.50	14,372	3,593.00	38,033	9,507.75	30,561	9,852.50
Sea-fish, fresh .....Tons. ...."	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
do other kinds .....Tons. ...."	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fish used fresh.....Value. ...."	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seal Oil.....Galls."	53,811	43,048.80	89,762	71,809.60	18,525	14,820.00	46,116	36,892.80	58,615	46,916.00
Whale Oil	373	298.40	24,200	19,360.00	18,000	14,400.00	16,937	13,549.60	400	20.00
Porpoise Oil	2,029	1,217.40	2,848	1,708.80	2,122	1,061.00	1,076	537.50	143	71.00
Cod Oil	103,018	51,509.00	119,093	59,546.50	160,055	80,027.50	136,529	68,264.50	91,627	45,813.00
Fish Oils	33,460	21,751.25	298,826	134,771.00	417,662	251,490.00	496,134	322,487.00	523,340	340,171.00
Total Value.....".....	4,376,526.56	.....	6,577,391.72	.....	7,573,139.85	.....	9,570,116.05	.....	10,547,402.44	.....

TABLE of the Aggregate Quantities and Values of Fish, the Produce of Canadian Fisheries, &c.—Continued.

Compiled from Departmental Fishery Reports for the above-named Years—Continued.

Kinds of Fish.		1874.		1875.		1876.		1877.		Total.	
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Codfish.....Cwt. and Qnts.	\$ 797,847 ⁴	3,502,912 25	748,755	3,256,877 53	829,711	4,128,100 25	814,969	3,661,199 75	6,630,972 ⁴	28,287,488 53	
do .....Bris.	398,080	1,235,607 00	300,258	1,250,002 64	418,586	1,652,051 50	316,673	1,329,921 50	3,906	8,932 00	
Herring .....smoked	454,209	113,552 25	642,000	160,500 00	549,160	137,287 50	549,205	137,301 25	2,937,984 ¹	11,103,459 64	
do .....do	do	do	do	do	do	do	do	do	3,578,414	986,970 00	
do .....fresh.....	20	100	....	....	....	....	....	....	1,600	6,400 00
do .....fresh water	7,959	39,795 00	9,400	56,400 00	10,781 ³	53,907 50	10,313	51,565 00	20	100 00	
Mackerel.....Cwt.	161,696	1,589,551 00	123,651 ²	1,236,545 00	104,356	992,794 00	163,916	1,639,160 00	70,256 ¹	355,253 50	
do .....Lbs.	59,000	8,850 00	39,980	5,997 00	32,620	4,893 00	191,036	28,655 40	1,106,364 ¹	11,569,639 00	
do .....presrvd. in cans.	80,460	12,069 00	21,400	3,210 00	347	1,735 00	133,325,800	466,640 00	177,938	25,680 00	
Haddock.....Cwt. ....	....	....	....	....	....	....	....	....	386,858	56,513 70
do .....Brls.	Qnts.	241	1,205 00	126	630 00	281,755 68	15,073,100	248	1,240 00		
do .....Lbs.	4,104,532	246,271 92	4,695,928	904,386 00	904,386 00	129,048	7,742 88	24,000	1,563,020 04		
do .....No.	do	do	do	do	do	do	do	do	24,000	12,000 00	
Halibut.....Cwt. ....	....	....	....	....	....	....	....	....	13,600	28,000 00
do .....Brls.	312	1,872 00	201	1,206 00	183	1,098 00	227 ³	1,365 00	1,361 ¹	65,855 00	
do .....Lbs.	589,275	35,356 50	573,015	34,410 90	1,014,500	60,870 50	789,460	47,367 60	3,628,885	21,751 10	
Pollack.....Cwt.	10,539	36,886 50	5,980	20,933 00	48,006	163,021 00	58,746	205,611	171,978	586,769 00	
do .....Qnts.	24,255	84,892 50	38,771	135,698 50	....	....	....	....	112,475	381,613 00
Hake.....Cwt.	28,925	101,237 50	29,817	104,359 50	73,232	256,312 00	77,454 ²	271,090 75	29,523 ²	1,001,856 25	
do .....Qnts.	42,852	149,982 00	16,685	58,397 50	....	....	....	....	193,072	631,145 00
Flounders.....Brls. ....	....	....	....	....	....	....	....	....	200	2,000 00
Salmon.....do in ice	7,382 ¹	130,246 00	5,026	87,684 00	4,509 ²	76,739 00	3,569 ¹	46,841 25	64,366	998,158 75	
do .....fresh	2,501,246	321,987 70	1,786,894	238,046 80	1,415,607 ²	185,613 48	2,104,914	283,082 30	14,849,382 ¹	1,973,059 33	
do .....smoked	No.	137,320	20,598 00	57,880	8,682 00	8,421 00	8,806	8,806	36,568	36,568 00	
do .....do	do	do	do	do	do	do	do	do	323,727	51,075 50	
do .....Lbs.	46,253	195,405 00	46,253	161,885 50	27,500	161,313	1	4 00	852	852 00	
Trout.....do presrvd. in cans.	493,146 00	574,526	144,253 43	195,921	163 ¹	11,867 70	80,260	12,039 00	159,578	23,906 70	
do .....Brls.	1,940,006	1,072 00	259	2,072 00	1,308	29,358 15	261,062	39,159 00	6,294,504	4,468,492 08	
do .....Lbs.	112,815	6,768 90	117,120	7,027 20	147,720	1,308	276 ¹	2,212	1,941 ²	1,724,000 00	
Alewives.....Brls.	55,830	195,405 00	46,253	161,313	27,500	161,313	1	4 00	745,455	44,727 10	
									308,550	1,021,822 00	

TABLE of the Aggregate Quantities and Values of Fish, the Produce of Canadian Fisheries, &c.—Concluded.
 Compiled from Departmental Fishery Reports for the above-named Years—Concluded.

Kinds of Fish.	1874.			1875.			1876.			1877.			Total.				
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	cts.				
Shad	12,342	\$ 98,736.00	115,164.00	\$ 83,580.00	9,374	\$ 74,992.00	94,553	\$ 657,120	552,647	\$ 55,413.05	55,413	\$ 657,120	55,413	50			
do	66,873	6,687.30	134,992.20	14,240.50	52,647	5,264.00	552,780	5,264.00	6,000	6,000	6,000	6,000	6,000	00			
Finnan Haddies	No.																
Bris.	3,520	31,680.00	2,972	26,748.00	2,866	25,841.00	32,632.50	397,632	50	32,632.50	32,632.50	397,632	50	397,632	50		
Eels	do	No.	37,418.70	266,619.90	291,737.70	291,737.70	28,747.42	1,864,415	186,415	1,864,415	186,415	1,864,415	186,415	1,864,415	186,415		
Scallop Fish	Cwt.																
Bass	Bris.	1,576	6,304.00	833	4,115.00	879 $\frac{1}{2}$	4,397.50	2,149 $\frac{1}{2}$	13,372.50	7,554	39,497.00	39,497.00	39,497.00	39,497.00			
do	Lbs.	439,423	26,365.38	126,786	7,607.16	302,914	18,174.84	232,429	13,945.74	1,692,405	101,842	94	101,842	94			
do and Perch..	Bris.																
Smelts	Tons.																
do	Bris.																
Oysters	Lbs.	1,156,350	69,381.00	1,451,580	87,094.80	1,990,825	119,449.50	2,266,202	135,972.12	8,160,456	4,090	17,440	8,160,456	4,090	17,440	00	
do	Bris.	14,318	42,772.00	11,716	35,107.00	16,886	50,568.00	29,568	88,704.00	180,316	479,627	36	180,316	479,627	36		
Mixed Fish	Lbs.																
do	Bris.																
Gaspereaux	Br.																
Ling	Ont.																
Lunge	Bris.	43	215.00	33	165.00	.....	1,149	5,745.00	99	495.00	1,248	6,240	1,248	6,240	00	
Winnoniche	No.	430	10,750.00	2560	6,250.00	.....	.....	.....	.....	.....	3,220	16,100	3,220	16,100	00
Touhadi	Bris.	7,500	1,875.00	9,050	2,262.50	3,000	750.00	3,290	822.50	822.50	680	17,000	680	17,000	00		
Scisces	Br.																
Trout, speckled and grey	Bris.	10,000	1,000.00	11,000	1,100.00	447,200	316	1,580.00	1,505	7,525.00	1,571.5	18,220	18,220	18,220	00		
do	do	13,951	139,510.00	8,965	89,650.00	11,744	11,744	35,566.00	458,740	36,687.20	926,940	74,353	926,940	74,353	926,940	20	
Sturgeon	No.	559	4,472.00	279	2,232.00	12,536	117,440.00	125,536	89,086	80,086	80,086	80,086	80,086	00	
Bar and Whitefish	Doz.	11,360	22,720.00	3,735	7,470.00	10,299	559 $\frac{1}{2}$	4,476.00	617 $\frac{1}{2}$	4,940.00	5,335	32,720	32,720	32,720	00		
Bar Fish	No.																
Sardines	Bris.	902	4,510.00	1,904.50	196	1,274.00	2,100	1,200	10,539	21,078.00	74,802.5	149,605	74,802.5	149,605	66	
Whitefish	Br.	17,134	171,340.00	4,230.00	2,230.00	.....	.....	.....	.....	2,642	2,642	1,321	1,321	1,321	00
do	Lbs.	84,611	56,911.00	56,911.00	56,911.00	56,911.00	56,911.00	56,911.00	56,911.00	8,130	40,650	33,817	33,817	33,817	00		
Pike	No.	930 $\frac{1}{2}$	4,112.00	948	5,740.00	1,080 $\frac{1}{2}$	7,402.00	1,080 $\frac{1}{2}$	1,080 $\frac{1}{2}$	1,770 $\frac{1}{2}$	12,727	50	12,727	50	12,727	50	
Pickeral	Br.	2,240	10,076.00	4,185	22,445.00	4,185	10,076	2,240	4,182	18,450.00	4,182	33,362.50	18,484.5	33,362.50	18,484.5	33,362.50	50

Tom Coil	Bush. ¹	20,000	10,000 00	20,400	10,200 00	22,000	11,000 00	20,000	10,000 00	82,400	41,200 00
Pike and Bass	Bush. ¹	.....	.....	2,563	640 75	3,015	1,507 50	.....	.....	3,156 50	3,001 50
Small and Mixed Fish	"	.....	.....	.....	.....	.....	.....	.....	.....	11,891	5,304 75
Fish used for local consumption	"	.....	.....	.....	.....	.....	.....	.....	.....	11,554	46,218 00
do	do	Value	.....	850	1,700 00	617	1,234 00	.....	.....	53,000 00	53,000 00
Maskinonge	No.	500	1,000 00	246	1,230 00	641 ²	3,207 50	767	1,534 00	2,734	5,468 00
do	No.	413	1,652 00	24,369	146,214 00	9,915	12,393 75	786 ²	5,932 50	2,455	13,692 50
Seals	No.	12,639	75,834 00	104	1,696 00	212	848 00	14,612	18,265 00	108,502	651,012 00
Seal Skins	"	.....	.....	.....	.....	.....	.....	.....	.....	24,527	24,527
Porpoises	"	.....	.....	.....	.....	.....	.....	.....	.....	8,128 75	30,658 75
Porpoise Skins	"	.....	.....	.....	.....	.....	.....	.....	.....	452	452
Sharks	"	.....	.....	.....	.....	.....	.....	.....	.....	319	1,396 00
Tunny	"	.....	.....	.....	.....	.....	.....	.....	.....	40	240 00
Coarse Fish	Bush. ¹	3,226	12,904 00	4,330	21,650 00	5,510	22,040 00	5,157	20,628 00	30,135	138,645 00
do	Lobster, prsd. in cans Lbs.	8,047,957	2,011,989 25	6,514,380	1,638,659 00	5,373,688	795,082 92	8,085,569	1,212,835	35	38,234,455
do	Fresh	.....	.....	.....	.....	.....	.....	5,000	250 00	5,000	8,146,299 02
do	Casses.	1,443	10,592 00	2,613	18,291 00	1,714	12,352 00	2,667	19,137 00	1,443	10,592 00
Cod Tongues and Sounds	Bris.	2,204	15,428 00	624	4,992 00	.....	.....	.....	.....	23,663	166,555 00
Fish Roes	"	.....	.....	.....	.....	.....	.....	.....	.....	3,493	34,340 00
Pumice	Tons. ....	.....	.....	.....	.....	.....	.....	.....	.....	2,323	36,760 00
Fish Gano	"	3,742	56,130 00	995	14,925 00	2,232 ³	33,787 50	1,421	21,315 00	9,903	143,296 00
Fish and Clams used as bait and manure	Bris.	18,361	5,538 25	29,604	8,831 75	83,127	36,943 50	222,379	195,724 25	510,569	288,524 00
Sea Fish, fresh	Tons.	181	7,157 00	2,200	110 00	.....	.....	.....	.....	181	7,157 00
do	do	.....	.....	200	10,748 00	.....	.....	.....	.....	2,200	110 00
do	other kinds	.....	.....	4,300 00	200	.....	.....	.....	.....	2,232	15,048 00
Fish used fresh	Value.	.....	.....	.....	.....	.....	.....	.....	.....	.....	239,672 30
Seal Oil	Galls.	54,095	27,047 50	98,709	49,354 50	55,126	27,567 00	73,560	36,780 00	548,349	254,232 20
Whale Oil	"	16,620	13,296 00	22,781	18,224 80	9,613	4,809 00	13,716	6,858 00	122,615	90,815 80
Porpoise Oil	"	17	13 60	2,667	2,133 60	9,610	7,684 00	11,188	8,950 40	31,699	23,377 30
Cod Oil	"	97,709	48,854 50	113,469	56,734 50	118,271	59,1 ² 5 50	225,129	112,564 50	1,164,900	582,449 50
Fish Oils	"	349,793	226,832 20	390,526	253,743 65	459,268	288,524 20	466,579	303,276 35	3,435,588	2,153,066 65
Total Value	.....	11,681,886 20	.....	.....	.....	10,350,385 29	.....	11,012,302 39	.....	11,422,501 77	83,111,712 27

STATEMENT showing the Quantity and Value of Fish and Products of Fish Exported from the Dominion of Canada during the Year ending the 31st December, 1877.

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Codfish, including Haddock, Ling & Pollock, Fresh....	United States....	Lbs.	\$		\$	Lbs.	\$
		152	9			152	9
do Dry Salted....	Great Britain	Cwt.		Cwt.		Cwt.	
	United States....	17,585	72,146	.....	.....	17,585	72,146
	Newfoundland...	89,352	292,711	79	410	89,431	293,121
	British W. Indies	1,224	4,276	.....	.....	1,224	4,276
	Spanish W. Indies	258,064	1,083,288	33	120	258,097	1,083,408
	French W. Indies	185,846	770,278	.....	.....	185,846	770,278
	Danish W. Indies	41,860	165,931	.....	.....	41,860	165,931
	Dutch W. Indies	3,050	13,683	15	60	3,065	13,743
	Hayti.....	105	437	.....	.....	105	437
	British Guiana...	7,255	32,143	.....	.....	7,255	32,143
	South America...	32,068	128,676	.....	.....	32,068	128,676
	Portugal.....	70,356	353,353	.....	.....	70,356	353,353
	Italy.....	11,897	58,080	.....	.....	11,897	58,080
	Madeira	34,425	149,087	.....	.....	34,425	149,087
	Australia.....	6,249	23,335	.....	.....	6,249	23,335
	Africa.....	2,302	11,510	.....	.....	2,302	11,510
		108	432	.....	.....	108	432
		761,746	3,159,366	127	590	761,873	3,159,956
do Wet Salted ...	Great Britain	Cwt.				Cwt.	
	United States....	8	26	.....	.....	8	26
	British W. Indies	151	403	.....	.....	151	403
	French W. Indies	18,189	89,102	.....	.....	18,189	89,102
		2,036	7,014	.....	.....	2,036	7,014
		20,384	96,545	.....	.....	20,384	96,545
do Pickled....	Great Britain	Brls.				Brls.	
	United States....	252	1,100	.....	.....	252	1,100
		449	1,492	.....	.....	449	1,492
		701	2,592	.....	.....	701	2,592
Mackerel, Fresh....	United States....	Lbs.				Lbs.	
		76,374	4,044	.....	.....	76,374	4,044
do Preserved in, cans.....	Great Britain	Lbs.				Lbs.	
	United States....	15,922	2,015	.....	.....	15,922	2,015
		53,104	4,980	.....	.....	53,104	4,980
		69,026	6,995	.....	.....	69,026	6,995

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		Brls.	\$	Brls.	\$	Brls.	\$
Mackerel, Pickled.	Great Britain	378	2,310	.....	.....	378	2,310
	United States....	102,698	845,016	651	7,771	103,349	852,787
	British W. Indies	18,088	126,042	.....	.....	18,088	126,042
	Spanish W. Indies	7,164	54,370	.....	.....	7,164	54,370
	French W. Indies	585	3,770	.....	.....	585	3,770
	Danish W. Indies	221	1,692	3	24	224	1,716
	Dutch W. Indies	5	36	.....	.....	5	36
	Hayti.....	953	8,177	.....	.....	953	8,177
	British Guiana...	1,229	9,807	.....	.....	1,229	9,807
		131,321	1,051,220	654	7,795	131,975	1,059,015
		Lbs.				Lbs.	
Halibut, Fresh.....	Great Britain	800	100	.....	.....	800	100
	United States....	8,300	425	.....	.....	8,300	425
		9,100	525	.....	.....	9,100	525
		Lbs.				Lbs.	
do Smoked.....	United States....	1,700	85	.....	.....	1,700	85
		Lbs.				Lbs.	
Herring, Fresh.....	United States....	1,264,688	19,764	.....	.....	1,264,688	19,764
		Brls.		Brls.		Brls.	
do Pickled	Great Britain	828	2,764	.....	.....	828	2,764
	United States....	36,722	127,856	253	1,130	36,975	128,986
	Newfoundland ...	20	60	.....	.....	20	60
	British W. Indies	48,011	193,189	.....	.....	48,011	193,189
	Spanish W. Indies	20,696	69,559	.....	.....	20,696	69,559
	French W. Indies	2,480	8,571	.....	.....	2,480	8,571
	Danish W. Indies	2,726	9,143	.....	.....	2,726	9,143
	Dutch W. Indies	50	235	.....	.....	50	235
	Hayti.....	12	32	.....	.....	12	32
	British Guiana...	2,215	8,873	.....	.....	2,215	8,873
	South America...	11	28	.....	.....	11	28
	Norway.....	4,532	13,592	1,436	4,308	5,968	17,900
	Sweden	7,120	28,580	.....	.....	7,120	28,580
	Madeira	217	753	.....	.....	217	753
	Australia	516	2,064	.....	.....	516	2,064
	Africa.....	20	60	.....	.....	20	60
		126,176	465,359	1,689	5,438	127,865	470,797

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		Lbs.	\$		\$	Lbs.	\$
Herring Smoked....	Great Britain	268,551	13,241	.....	.....	268,551	13,241
	United States	3,431,448	43,463	.....	.....	3,431,448	43,463
	British W. Indies	239,867	7,892	.....	.....	239,867	7,892
	Spanish W. Indies	34,724	1,265	.....	.....	34,724	1,265
	French W. Indies	65,486	2,438	.....	.....	65,486	2,438
	Danish W. Indies	12,994	473	.....	.....	12,994	473
	Dutch W. Indies	4,000	100	.....	.....	4,000	100
	Hayti.....	38,000	1,241	.....	.....	38,000	1,241
	British Guiana ...	17,200	807	.....	.....	17,200	807
	South America ..	12,042	364	.....	.....	12,042	364
	St. Pierre et Mi-quelon.....	776	41	.....	.....	776	41
	Madeira.....	11,000	422	.....	.....	11,000	422
	Africa.....	2,500	50	.....	.....	2,500	50
		4,138,588	71,797	.....	.....	4,138,588	71,797
Sea Fish, other, Fresh.....	United States....		76,500	.....	.....		76,500
		Brls.				Brls.	
do Pickled	Great Britain	503	1,468	.....	.....	503	1,468
	United States....	5,488	37,361	.....	.....	5,488	37,361
	British W. Indies	1,440	6,327	.....	.....	1,440	6,327
	Spanish W. Indies	440	2,105	.....	.....	440	2,105
	French W. Indies	370	1,852	.....	.....	370	1,852
	Danish W. Indies	27	153	.....	.....	27	153
	Hayti.....	462	2,978	.....	.....	462	2,978
	British Guiana ...	42	207	.....	.....	42	207
	St. Pierre et Mi-quelon.....	56	216	.....	.....	56	216
		8,828	52,667	.....	.....	8,828	52,667
		Lbs.				Lbs.	
do Preserved	United States....	1,160	116	.....	.....	1,160	116
		Brls.		Brls.		Brls.	
Oysters, Fresh	Great Britain	182	282	.....	.....	182	282
	United States....	88	176	.....	.....	88	176
	Newfoundland ...	220	414	.....	.....	220	414
	British W. Indies	2	5	.....	.....	2	5
	St. Pierre et Mi-quelon.....	89	239	12	90	101	329
		581	1,116	12	90	593	1,206
		Brls.				Brls.	
Lobsters, Fresh	United States....	137	654	.....	.....	137	654

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Lobsters, Fresh, in cans	United States.....	315,716	4,910	.....	.....	315,716	4,910
do Preserved	Great Britain	6,629,126	733,190	306,144	37,616	6,935,270	770,806
	United States....	1,458,222	169,361	.....	.....	1,458,222	169,361
	Newfoundland ...	48	5	.....	.....	48	5
	British W. Indies	17,556	2,642	.....	.....	17,556	2,642
	Spanish W. Indies	2,016	270	.....	.....	2,016	270
	Danish W. Indies	648	70	.....	.....	648	70
	Dutch W. Indies	2,400	275	.....	.....	2,400	275
	St. Pierre et Mi-quelon.....	336	40	.....	.....	336	40
	Madeira	1,440	180	.....	.....	1,440	180
		8,111,792	906,033	306,144	37,616	8,417,936	943,649
Fish-Bait	United States.....	.....	600	.....	.....	.....	600
	Newfoundland ...	.....	350	.....	.....	.....	350
	St. Pierre et Mi-quelon... .....	.....	624	.....	.....	.....	624
		.....	1,574	.....	.....	.....	1,574
Salmon, Fresh	United States....	2,015,161	191,728	1,800	150	2,016,961	191,878
	Newfoundland ...	1,800	300	.....	.....	1,800	300
	British W. Indies	24,235	2,037	.....	.....	24,235	2,037
	Spanish W. Indies	125	14	.....	.....	125	14
	St. Pierre et Mi-quelon.....	3,564	275	.....	.....	3,564	275
		2,044,885	194,354	1,800	150	2,046,685	194,504
do Smoked	United States....	25,493	3,016	.....	.....	25,493	3,016
	British W. Indies	400	26	.....	.....	400	26
	Danish W. Indies	460	62	.....	.....	460	62
		26,353	3,104	.....	.....	26,353	3,104
do Canned	Great Britain	1,173,464	158,043	.....	.....	1,173,464	158,043
	United States....	1,804,174	203,280	.....	.....	1,804,174	203,280
	British W. Indies	299	113	.....	.....	299	113
	South America...	11,800	650	.....	.....	11,800	650
	Madeira	960	200	.....	.....	960	200
	Australia.....	314,256	41,935	.....	.....	314,256	41,935
	Africa	394	48	.....	.....	394	48
		3,305,347	404,269	.....	.....	3,305,347	404,269

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		Brls.	\$	Brls.	\$	Brls.	\$
Salmon, Pickled....	Great Britain.....	68	670	.....	.....	68	670
	United States.....	4,210	50,117	1,005	10,656	5,215	60,773
	British W. Indies	1,162	14,991	.....	.....	1,162	14,991
	Spanish W. Indies	110	962	.....	.....	110	962
	Danish W. Indies	19	235	.....	.....	19	235
	Hayti.....	14	83	.....	.....	14	83
	British Guiana ..	19	250	.....	.....	19	250
	South America ..	10	95	.....	.....	10	95
	Italy	1	15	.....	.....	1	15
	Australia	1,765	12,819	.....	.....	1,765	12,819
	Sandwich Islands	50	350	.....	.....	50	350
		8,428	80,587	1,005	10,656	8,433	91,243
Fish, all other, Fresh.....	Great Britain .....	.....	54	.....	.....	.....	54
	United States.....	.....	111,210	.....	.....	.....	111,210
		.....	111,264	.....	.....	.....	111,264
do Pickled	Great Britain	Brls.		.....	.....	Brls.	
	United States....	261	318	.....	.....	261	318
	British W. Indies	3,614	14,130	.....	.....	3,614	14,130
		4	32	.....	.....	4	32
		3,879	14,480	.....	.....	3,879	14,480
Fish Oil, Cod.....	Great Britain.....	Galls.		Galls.		Galls.	
	United States.....	49,982	23,641	.....	.....	49,982	23,641
	Newfoundland ..	165,642	82,776	160	80	165,802	82,856
	British W. Indies	20	10	.....	.....	20	10
		1,933	1,031	.....	.....	1,933	1,031
		217,577	107,458	160	80	217,737	107,538
do Whale	Great Britain	Galls.		.....	.....	Galls.	
		10,461	4,498	.....	.....	10,461	4,498
do Seal.....	Great Britain	Galls.		.....	.....	Galls.	
		6,159	3,476	.....	.....	6,159	3,476
do Other.....	Great Britain	Galls.		.....	.....	Galls.	
	United States....	57,448	18,392	.....	.....	57,448	18,392
		25,770	10,154	.....	.....	25,770	10,154
		83,218	28,546	.....	.....	83,218	28,546
Furs or Skins, the produce of Marine Animals	Great Britain .....	.....	11,211	.....	2,667	.....	13,878

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Concluded.*

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		\$		\$		\$	
Other Articles.....	Great Britin.....	3,235		263		3,498	
	United States.....	43,046		1,577		44,623	
	British W. Indies.....	737		30		767	
	Spanish W. Indies.....	35				35	
	Danish W. Indies.....	20				20	
	Newfoundland	4				4	
	St. Pierre et Miquelon.....	135				135	
	Hayti.....	1,120				1,120	
		48,332		1,870		50,202	

RECAPITULATION.

COUNTRIES.					
Great Britain.....		1,052,180		40,546	1,092,726
United States		2,339,383		21,774	2,361,157
Newfoundland.....		5,419			5,419
British West Indies.....		1,527,454		150	1,527,604
Spanish West Indies.....		898,858			898,858
French West Indies.....		189,576			189,576
Danish West Indies.....		25,531		84	25,615
Dutch West Indies.....		1,083			1,083
Hayti.....		45,774			45,774
British Guiana		148,620			148,620
South America.....		354,490			354,490
St. Pierre et Miquelon		1,570		90	1,660
Portugal.....		58,080			58,080
Italy.....		149,102			149,102
Norway.....		13,592		4,308	17,900
Sweden.....		28,580			28,580
Madeira		24,890			24,890
Africa		590			590
Australia		68,328			68,328
Sandwich Islands.....		350			350
Total		6,933,450		66,952	7,000,402
Total Exports to United States.....		2,339,383		21,774	2,361,157
do other Countries.....		4,594,067		45,178	4,639,245
Grand Total		6,933,450		66,952	7,000,402

STATEMENT showing the Value of Fish and Product of Fish, Imported and Entered for Consumption in the Dominion of Canada; also the Duty collected thereon during the Year ending 31st December, 1877.

ARTICLES.	COUNTRIES WHENCE IMPORTED.	IMPORTED.		ENTERED FOR HOME CONSUMPTION.		DUTY.
		Quantity.	Value.	Quantity	Value.	
DUTIABLE.						
Fish, salted or smoked.....	Great Britain.....	Lbs. 8,830	\$ 853	Lbs. 8,830	\$ 853	\$ 88 30
	United States.....	36,647	2,346	36,647	2,333	366 47
		45,477	3,199	45,477	3,186	454 77
do Oysters, in cans, Fresh.	United States.....	796	.....	770	.....	134 77
do do Preserved.....	United States.....	1,071	.....	1,229	.....	214 98
	China	68	.....	128	.....	22 62
		1,139	.....	1,357	.....	237 60
do Lobsters, Preserved.....	Great Britain.....	44	.....	44	.....	7 70
	United States.....	1,856	.....	1,837	.....	303 97
		1,900	.....	1,881	.....	311 67
do Other, Preserved in oil	Great Britain.....	22,461	.....	23,318	.....	4,082 50
	United States.....	11,815	.....	10,498	.....	1,836 35
	France	5,646	.....	4,825	.....	843 78
	St. Pierre et Mi-quelon.....	145	.....	16	.....	2 80
	Germany	9	.....	9	.....	1 57
	China .....	.....	.....	46	.....	8 05
		40,076	.....	38,712	.....	6,775 05
do Fresh, from Inland Waters.....	United States.....	Lbs. 179	.....	Lbs. 179	.....	31 45
	do	17,155	671	17,155	671	117 52
		17,155	850	17,155	850	148 97
Fish Oil, Cod Liver.....	Great Britain.....	Galls. 462	771	Galls. 462	771	135 16
	United States.....	2,017	1,798	2,017	1,798	314 52
		2,479	2,569	2,479	2,569	449 68
do Other.....	United States.....	Galls. 3,411	3,770	Galls. 3,411	3,770	659 84

STATEMENT showing the Quantity and Value of Fish Imported, &c.—
Dominion of Canada.—Continued.

ARTICLES.	COUNTRIES WHENCE IMPORTED.	IMPORTED.		ENTERED FOR HOME CONSUMPTION.		DUTY. Amount Received.
		Quantity.	Value.	Quantity.	Value.	
FREE.						
Fish, including Cod, Haddock, Ling and Pollock, Fresh.....	United States.....	Lbs.	\$	Lbs.	\$	\$
		2,675,060	81,589	2,675,060	81,589	.....
do do Dry salted.....	United States.....	Cwt.		Cwt.		
	Newfoundland...	29,395	106,329	29,395	106,329	.....
		3,010	11,926	3,010	11,926	.....
		32,405	118,255	32,405	118,255	.....
do do Wet salted..	United States.....	Cwt.		Cwt.		
	Newfoundland...	493	1,380	493	1,380	.....
		400	600	400	600	.....
		893	1,980	893	1,980	.....
do do Pickled.....	United States.....	Brls.		Brls.		
		18	83	18	83	.....
do do Smoked	United States.....	Lbs.		Lbs.		
		720,721	52,449	920,721	52,449	.....
do Mackerel, Fresh.....	United States.....	Lbs.		Lbs.		
		156,537	3,290	156,537	3,290	.....
do do Pickled.....	United States.....	Brls.		Brls.		
	Newfoundland...	998	7,688	998	7,688	.....
	British W. Indies	47	354	47	354	.....
		164	820	164	820	.....
		1,209	8,862	1,209	8,862	.....
do Halibut, Fresh.....	United States.....	Lbs.		Lbs.		
		26,127	1,378	26,127	1,378	.....
do do Pickled	United States.....	Brls.		Brls.		
		29	153	29	153	.....
do Herring, Fresh.....	United States.....	Lbs.		Lbs.		
		170,403	3,194	170,403	3,194	.....
do do Pickled	United States.....	Brls.		Brls.		
	Newfoundland ..	2,341	8,082	2,341	8,082	.....
	St. Pierre et Mi- quelon	2,660	10,786	2,660	10,786	.....
		785	1,775	785	1,775	.....
		5,786	20,643	5,786	20,643	.....

STATEMENT showing the Quantity and Value of Fish Imported, &c.—
Dominion of Canada—Continued.

ARTICLES.	COUNTRIES WHENCE IMPORTED.	IMPORTED.		ENTERED FOR HOME CONSUMPTION.		DUTY.
		Quantity.	Value.	Quantity.	Value.	
FREE—Continued.		Lbs.	\$	Lbs.	\$	
Fish, Herring, Smoked	United States....	470,082	14,124	470,082	14,124	.....
do Sea Fish, Other, Fresh...	United States....	Lbs. 24,127	1,083	Lbs. 24,127	1,083	.....
do do Pickled ...	United States ...	Brls. 68	309	Brls. 68	309	.....
do do Preserved, in cans	United States....	Lbs. 2,458	309	Lbs. 2,458	309	.....
Oysters, Fresh, in shell	United States....	Brls. 2,756	9,622	Brls. 2,756	9,622	.....
do do in cans	Great Britain ... United States....	Lbs. 96 1,192,662	10 107,730	Lbs. 96 1,192,662	10 107,730	.....
		1,192,758	107,740	1,192,758	107,740	.....
do Shelled, in bulk	United States....	Galls. 98,689	93,293	Galls. 98,689	93,293	.....
Lobsters, Fresh, in barrels ...	United States....	Brls. 373	2,256	Brls. 373	2,256	.....
do Preserved, in cans ..	United States....	Lbs. 45,399	5,938	Lbs. 45,399	5,938	.....
do Fresh, in cans	United States ... St. Pierre et Mi- quelon	Lbs. 11,544 4,704 16,248	1,560 392 1,952	Lbs. 11,544 4,704 16,248	1,560 392 1,952	.....
Fish, Bait	United States....	Brls. 1,190	5,160	Brls. 1,190	5,160	.....
do Clams, or Other.....	United States....	Brls. 342	1,833	Brls. 342	1,833	.....
do Salmon, Fresh	United States.... Newfoundland...	Lbs. 26,698 20	1,499 3	Lbs. 26,698 20	1,499 3	.....
		26,718	1,502	26,718	1,502	.....

STATEMENT showing the Quantity and Value of Fish Imported, &c.—
Dominion of Canada—Continued.

ARTICLES.	COUNTRIES WHENCE IMPORTED.	IMPORTED.		ENTERED FOR HOME CONSUMPTION.		DUTY. Amount Received.
		Quantity.	Value.	Quantity.	Value.	
FREE—Continued.		Lbs.	\$	Lbs.	\$	
Fish, Salmon, Smoked	United States....	1,651	234	1,651	234	.....
do do Canned	United States....	Lbs. 119,013	18,839	Lbs. 119,013	18,839	.....
do do Pickled	Great Britain ... United States....	Brls. 15 51	150 595	Brls. 15 51	150 595	.....
do all other, Fresh	United States....	66	745	66	745	.....
do do Pickled	United States....	Brls. 798	3,553	Brls. 798	3,553	.....
do Oil, Whale.....	United States....	Galls. 4,347	3,095	Galls. 4,347	3,095	.....
do do Cod	United States.... Newfoundland ...	Galls. 59,348 1,547	26,011 704	Galls. 59,348 1,547	26,011 704	.....
do do Other	Great Britain ... United States....	60,895	26,715	60,895	26,715	.....
Furs or Skins, the produce of Fish or Marine Animals.....	United States..... Newfoundland .. St. Pierre et Mi- quelon	Galls. 458 88,733	199 35,067	Galls. 458 88,733	199 35,067	.....
Fish and products of Fish and Fish Oil, the produce of Newfoundland	Newfoundland...	89,191	35,266	89,191	35,266	.....
do do Fish	Newfoundland ...	.....	6,100	.....	6,100	.....
do do Fish Oil..	Newfoundland ...	120,343	.....	120,343	.....	.....
do do Fish Oil..	Newfoundland ...	443,757	.....	443,757	.....	.....
do do Fish Oil..	Newfoundland ...	Galls. 136,754	75,427	Galls. 136,754	75,427	.....

STATEMENT showing the Quantity and Value of Fish Imported, &c.—
Dominion of Canada—Continued.

RECAPITULATION.

COUNTRIES WHENCE IMPORTED.	IMPORTED.		ENTERED FOR HOME CONSUMPTION.		DUTY. Amount Collected.
	Dutiable.	Free.	Dutiable.	Free.	
	\$	\$	\$	\$	\$ cts.
Great Britain	24,129	359	24,986	359	4,313 66
United States.....	24,302	603,874	23,085	603,874	3,979 87
Newfoundland.....		667,131		667,131	.....
France	5,646	.....	4,825	.....	843 78
Germany	9	.....	9	.....	1 57
China	68	.....	174	.....	30 67
St. Pierre et Miquelon.....	145	3,047	16	3,047	2 80
British West Indies.....		820	.....	820	.....
Total	54,299	1,275,231	53,095	1,275,231	9,172 35
Total Dutiable.....	54,299	.....	53,095	.....	9,172 35
do Free	1,275,231	.....	1,275,231	.....	.....
Total Imports of Fish and Products of Fish, for the year ending 31st December, 1877	1,329,530	.....	1,328,326	.....	9,172 35
Total Imports from United States	24,302	603,874	23,085	603,874	3,979 87
do Other Countries	29,997	671,357	30,010	671,357	5,192 48
Grand Total.....	54,299	1,275,231	53,095	1,275,231	9,172 35

STATEMENT showing the Quantity and Value of Fish and Products of Fish
Exported from the Dominion of Canada during the Six Months ending
the 31st December, 1877.

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity	Value.	Quantity.	Value.
Codfish, including Haddock, Ling and Pollock, Fresh	United States....	Lbs.	\$		\$	Lbs.	\$
		40	4			40	4
		Cwt.				Cwt.	
do Wet Salted.....	Great Britain ...	8	26			8	26
		Cwt.		Cwt.		Cwt.	
do Dry Salted ...	Great Britain ...	17,552	71,921			17,552	71,921
	United States....	73,122	227,816	79	410	73,201	228,226
	Newfoundland ..	584	1,704			584	1,704
	British W. Indies	129,931	542,703	33	120	129,964	542,823
	Spanish W. Indies	93,661	382,553			93,661	382,553
	French W. Indies	26,644	100,666			26,644	100,666
	Danish W. Indies	2,206	9,894	15	60	2,221	9,954
	Dutch W. Indies.	105	437			105	437
	Hayti	2,389	11,626			2,389	11,626
	British Guiana...	12,165	50,266			12,165	50,266
	South America ..	52,080	260,430			52,080	260,430
	Portugal	8,320	42,153			8,320	42,153
	Italy	32,880	144,166			32,880	144,166
	Madeira	3,163	13,935			3,163	13,935
	Australia	2,302	11,510			2,302	11,510
		457,104	1,871,780	127	590	457,231	1,872,370
at Pickled	Great Britain ...	Brls.				Brls.	
	United States....	252	1,100			252	1,100
		449	1,492			449	1,492
		701	2,592			701	2,592
Mackerel, Fresh ...	United States....	Lbs.				Lbs.	
		75,671	3,982			75,671	3,982
do Pickled	Great Britain ...	Brls.		Brls.		Brls.	
	United States....	378	2,310			378	2,310
	British W. Indies	88,270	727,656	651	7,771	88,921	735,427
	Spanish W. Indies	9,097	58,148			9,097	58,148
	French W. Indies	3,142	23,289			3,142	23,289
	Danish W. Indies.	478	3,000			478	3,000
	Dutch W. Indies.	186	1,417	3	24	189	1,441
	Hayti	5	36			5	36
	British Guiana...	352	3,168			352	3,168
		263	1,834			263	1,834
		102,171	820,858	654	7,795	102,825	828,653

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Mackerel, Canned.	Great Britain ... United States....	15,922	2,015	.....	.....	15,922	2,015
		53,104	4,980	.....	.....	53,104	4,980
		69,026	6,995	.....	.....	69,026	6,995
Halibut, Smoked...	United States....	Lbs. 1,700	85	.....	.....	Lbs. 1,700	85
		Lbs. 301,400	7,797	.....	.....	Lbs. 301,400	7,797
Herring, Fresh....	United States....	Brls. 170	645	Brls. 253	1,130	Brls. 170	645
		18,903	71,618	.....	.....	19,156	72,748
		Newfoundland ... British W. Indies Spanish W. Indies French W. Indies Danish W. Indies Dutch W. Indies British Guiana... Norway	20 23,539 9,768 1,537 1,961 50 934 4,532	60 92,699 31,825 4,867 6,481 235 3,345 13,592 1,436	..... ..... ..... ..... ..... ..... ..... .....	20 23,539 9,768 1,537 1,961 50 934 5,968	60 92,699 31,825 4,867 6,481 235 3,345 17,900
		Madeira	70	208	.....	70	208
		Australia.	516	2,064	.....	516	2,064
		.....	62,000	227,639	1,689	5,438	63,689
		.....	.....	.....	.....	.....	233,077
		do Smoked	Lbs. 237,551 2,196,825 64,779 10,624 29,411 9,534 4,000 16,000 3,400 9,952 176 4,000	12,101 27,521 1,791 272 1,120 313 100 400 107 257 6 190	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....	Lbs. 237,551 2,196,825 64,779 10,624 29,411 9,534 4,000 16,000 3,400 9,952 176 4,000	12,101 27,521 1,791 272 1,120 313 100 400 107 257 6 190
		.....	2,586,252	44,178	.....	.....	2,586,252
		.....	.....	26,338	.....	.....	26,338
		do Pickled.....	Brls. 352 2,307 736 80 23 32	960 28,085 3,117 400 132 157	..... ..... ..... ..... ..... .....	Brls. 352 2,307 736 80 23 32	960 28,085 3,117 400 132 157
		3,530	32,851	3,530	32,851

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada.—*Continued.*

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Sea Fish, other, Preserved	United States....	Lbs. 1,160	\$ 116	.....	.....	Lbs. 1,160	\$ 116
Oysters, Fresh.....	Great Britain	Brls. 182	282	Brls. .....	.....	Brls. 182	282
	United States....	75	124	.....	.....	75	124
	Newfoundland ...	165	328	.....	.....	165	328
	St. Pierre et Mi-quelon.....	77	212	12	90	89	302
		499	946	12	90	511	1,036
Lobsters, Fresh ...	United States....	Brls. 137	654	.....	.....	Brls. 137	654
do Fresh, in cans	United States....	Lbs. 315,716	\$ 4,910	.....	.....	Lbs. 315,716	\$ 4,910
do Preserved	Great Britain ...	Lbs. 5,294,958	\$ 598,767	Lbs. 306,144	\$ 37,616	Lbs. 5,601,102	\$ 636,383
	United States....	992,278	118,644	.....	.....	992,278	118,644
	British W. Indies	12,424	1,905	.....	.....	12,424	1,905
	Spanish W. Indies	2,016	270	.....	.....	2,016	270
	Danish W. Indies	648	70	.....	.....	648	70
	Dutch W. Indies	2,400	275	.....	.....	2,400	275
	St. Pierre et Mi-quelon	336	40	.....	.....	336	40
	Madeira	1,440	180	.....	.....	1,440	180
		6,306,500	\$ 720,151	306,144	\$ 37,616	6,612,644	\$ 757,787
Fish-Bait	Newfoundland .....	.....	350	.....	.....	.....	350
	St. Pierre et Mi-quelon .....	.....	624	.....	.....	.....	624
		.....	974	.....	.....	.....	974
Salmon, Fresh	United States....	Lbs. 1,086,925	\$ 99,673	Lbs. 1,800	\$ 150	Lbs. 1,088,725	\$ 99,823
	British W. Indies	24,187	2,027	.....	.....	24,187	2,027
	St. Pierre et Mi-quelon	3,564	275	.....	.....	3,564	275
		1,114,676	\$ 101,973	1,800	\$ 150	1,116,476	\$ 102,125
do Smoked	United States....	Lbs. 16,783	\$ 1,976	.....	.....	Lbs. 16,783	\$ 1,976
	British W. Indies	400	26	.....	.....	400	26
	Danish W. Indies	460	62	.....	.....	460	62
		17,643	\$ 2,064	.....	.....	17,643	\$ 2,064

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		Lbs.	\$		\$	Lbs.	\$
Salmon, Canned...	Great Britain ...	1,168,184	157,273	.....	.....	1,168,184	157,273
	United States....	1,799,294	202,780	.....	.....	1,799,294	202,780
	British W. Indies	299	113	.....	.....	299	113
	South America...	11,800	650	.....	.....	11,800	650
	Madeira	960	200	.....	.....	960	200
	Australia	314,256	41,935	.....	.....	314,256	41,935
		3,294,793	402,951	.....	.....	3,294,793	402,951
		Brls.		Brls.		Brls.	
do Pickled	Great Britain ...	68	670	.....	.....	68	670
	United States....	3,492	40,314	1,005	10,656	4,497	50,970
	British W. Indies	733	9,783	.....	.....	733	9,783
	Spanish W. Indies	59	500	.....	.....	59	500
	Danish W. Indies	19	235	.....	.....	19	235
	Hayti	1	19	.....	.....	1	19
	British Guiana...	19	250	.....	.....	19	250
	South America ..	10	95	.....	.....	10	95
	Italy	1	15	.....	.....	1	15
	Australia	1,765	12,819	.....	.....	1,765	12,819
	Sandwich Islands	50	350	.....	.....	50	350
		6,217	65,050	1,005	10,656	7,222	75,706
Fish, all other,							
Fresh.....	Great Britain		54	.....	.....		54
	United States....		61,745	.....	.....		61,745
			61,799	.....	.....		61,799
		Brls.				Brls.	
do Pickled	Great Britain	261	318	.....	.....	261	318
	United States....	3,614	14,130	.....	.....	3,614	14,130
	British W. Indies	4	32	.....	.....	4	32
		3,879	14,480	.....	.....	3,879	14,480
		Galls.		Galls.		Galls.	
Fish Oil, Cod.....	Great Britain....	49,982	23,641	.....	.....	49,982	23,641
	United States....	150,774	74,517	160	80	150,934	74,597
	British W. Indies	897	489	.....	.....	897	489
		201,653	98,647	160	80	201,813	98,727
		Galls.				Galls.	
do Seal.....	Great Britain....	6,159	3,476	.....	.....	6,159	3,476
		Galls.				Galls.	
do Whale	Great Britain....	10,461	4,498	.....	.....	10,461	4,498

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ARTICLES.	COUNTRIES.	GOODS, THE PRODUCE OF CANADA.		GOODS, NOT THE PRODUCE OF CANADA.		TOTAL EXPORTS, PRODUCE AND NOT PRODUCE.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		Galls.	\$		\$	Galls.	\$
Fish Oil, Other	Great Britain....	1,374	619	.....	.....	1,374	619
	United States....	22,767	9,094	.....	.....	22,767	9,094
		24,141	9,713	.....	.....	24,141	9,713
Furs or Skins of Marine Animals..	Great Britain....	.....	8,924	.....	2,667	.....	11,591
Other Articles	Great Britain....	.....	270	.....	263	.....	533
	United States....	.....	42,345	.....	1,577	.....	43,922
	British W. Indies	.....	357	.....	30	.....	387
	Newfoundland ..	.....	4	.....	.....	.....	4
	Danish W. Indies	.....	20	.....	.....	.....	20
	Hayti.....	.....	1,120	.....	.....	.....	1,120
		.....	44,116	.....	1,870	.....	45,986

RECAPITULATION.

COUNTRIES.						
Great Britain....	.....	889,870	.....	40,546	.....	930,416
United States.....	.....	1,798,396	.....	21,774	.....	1,820,170
Newfoundland ..	.....	2,446	.....	.....	.....	2,446
British West Indies.	.....	713,190	.....	150	.....	713,340
Spanish West Indies.	.....	439,109	.....	.....	.....	439,109
French West Indies ..	.....	109,653	.....	.....	.....	109,653
Danish West Indies.	.....	18,624	.....	84	.....	18,708
Dutch West Indies.	.....	1,083	.....	.....	.....	1,083
Hayti .....	.....	16,333	.....	.....	.....	16,333
British Guiana .....	.....	55,959	.....	.....	.....	55,959
South America.....	.....	261,432	.....	.....	.....	261,432
Portugal .....	.....	42,153	.....	.....	.....	42,153
Italy .....	.....	144,181	.....	.....	.....	144,181
St. Pierre et Miquelon.	.....	1,157	.....	90	.....	1,247
Norway .....	.....	13,592	.....	4,308	.....	17,900
Madeira. ....	.....	14,713	.....	.....	.....	14,713
Australia.....	.....	68,328	.....	.....	.....	68,328
Sandwich Islands.....	.....	350	.....	.....	.....	350
Total .....	.....	4,590,569	.....	66,952	.....	4,657,521
Total Exports of Fish to United States .....	.....	1,798,396	.....	21,774	.....	1,820,170
Total Exports of Fish to other Countries..	.....	2,792,173	.....	45,178	.....	2,837,351
Grand Total .....	.....	4,590,569	.....	66,952	.....	4,657,521

STATEMENT shewing the Value of Fish and Products of Fish Imported and Entered for Consumption in the Dominion of Canada, also the Duty Collected thereon during the Six Months ending 31st December, 1877.

ARTICLES.	COUNTRIES.	IMPORTED.		ENTERED FOR HOME CONSUMPTION.		DUTY.	RATE OF DUTY.
		Quantity.	Value.	Quantity.	Value.		
DUTIABLE.							
Fish, Salted or Smoked	Great Britain ...	Lbs. 8,257	\$ 810	Lbs. 8,257	\$ 810	82 57	1 c. per lb.
	United States....	19,063	1,268	19,563	1,310	195 63	do
		27,320	2,078	27,820	2,120	278 20	do
do Oysters, Preserved	United States....		1,071		1,229	214 98	17½ per c. Ad Val.
	China		14		14	2 54	do
			1,085		1,243	217 52	do
do Lobsters, Preserved	United States....		1,149		1,030	179 98	do
do Other, Preserved in Oil....	Great Britain		13,972		16,021	2,803 89	do
	United States....		6,781		6,156	1,077 30	do
	France		3,694		3,542	619 85	do
	Germany		9		9	1 57	do
	China				46	8 05	do
			24,456		25,774	4,510 66	do
do Fresh, from Inland Waters	United States....	Lbs. 17,155	671	Lbs. 17,155	671	117 52	do
do Oil, Cod Liver	Great Britain ...	Galls. 434	700	Galls. 434	700	122 50	do
	United States....	1,645	1,281	1,645	1,281	224 16	do
		2,079	1,981	2,079	1,981	346 66	do
do Oil, Other	United States....	Galls. 2,049	2,033	Galls. 2,049	2,033	355 76	do
FREE.							
Fish, Cod, Haddock, Ling and Pollock, Fresh...	United States....	Lbs. 755,337	28,343	Lbs. 755,337	28,343	.....
do Dry, Salted ...	United States....	Cwt. 15,880	54,188	Cwt. 15,880	54,188	.....
	Newfoundland ..	2,106	8,415	2,106	8,415	.....
		17,986	62,603	17,986	62,603	.....

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ARTICLES.	COUNTRIES.	IMPORTED.		ENTERED FOR HOME CONSUMPTION.		DUTY.	RATE OF DUTY.
		Quantity.	Value.	Quantity.	Value.		
FREE—<i>Continued.</i>							
Fish, Cod, Haddock, Ling and Pollock, Wet, Salted.....	United States.... Newfoundland ..	Cwt. 151 400	\$ 453 600	Cwt. 151 400	\$ 453 600	.....	.....
		551	1,053	551	1,053	.....	.....
do Pickled	United States....	Brls. 4	30	Brls. 4	30	.....	.....
do Smoked	United States....	Lbs. 429,622	25,790	Lbs. 429,622	25,790	.....	.....
do Mackerel, Fresh	United States....	Lbs. 7,932	687	Lbs. 7,932	687	.....	.....
Fish, Mackerel. Pickled.....	United States.... British W. Indies	Brsls. 460 164	3,934 820	Brsls. 460 164	3,934 820	.....	.....
		624	4,754	624	4,754	.....	.....
do Halibut, Fresh	United States....	Lbs. 11,971	541	Lbs. 11,971	541	.....	.....
do do Pickled.	United States....	Brls. 7	44	Brls. 7	44	.....	.....
do Herring, Fresh	United States....	Lbs. 26,245	448	Lbs. 26,245	448	.....	.....
do do Pickled.	United States.... Newfoundland...	Brls. 1,740 1,521	5,689 6,469	Brls. 1,740 1,521	5,689 6,469	.....	.....
		3,261	12,158	3,261	12,158	.....	.....
do do Smoked	United States....	Lbs. 277,396	8,909	Lbs. 277,396	8,909	.....	.....
Sea Fish, other, Fresh	United States....	Lbs. 9,122	418	Lbs. 9,122	418	.....	.....
do do Pickled	United States....	Brls. 66	300	Brls. 66	300	.....	.....

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ARTICLES.	COUNTRIES.	IMPORTED.		ENTERED FOR HOME CONSUMPTION.		DUTY.	RATE OF DUTY.
		Quantity.	Value.	Quantity.	Value.		
FREE—Continued.							
Sea Fish, other, Preserved.	United States....	Lbs. 340	\$ 32	Lbs. 340	\$ 32	\$ cts.	
Oysters, Fresh, in Shell	United States....	Brls. 1,448	4,826	Brls. 1,448	4,826		
do do Cans ...	United States....	Lbs. 910,604	61,666	Lbs. 910,604	61,666		
do Shelled, in Bulk.	United States....	Galls. 51,017	47,370	Galls. 51,017	47,370		
Lobsters, Fresh, in Brls.	United States....	Brls. 207	1,271	Brls. 207	1,271		
do do Cans ...	United States....	Lbs. 11,544	1,560	Lbs. 11,554	1,560		
	St. Pierre et Mi- quelon....	4,704	392	4,704	392		
		16,248	1,952	16,248	1,952		
do Preserved, in Cans.	United States....	24,004	2,878	24,004	2,878		
Fish Bait	United States....	Brls. 1,037	4,312	Brls. 1,037	4,312		
do Clams or other	United States....	Brls. 3	17	Brls. 3	17		
do Salmon, Fresh	United States....	Lbs. 3,040	71	Lbs. 3,040	71		
	Newfoundland ..	20	3	20	3		
		3,060	74	3,060	74		
do do Smoked.	United States....	Lbs. 783	100	Lbs. 783	100		
do do Canned	United States....	Lbs. 102,739	16,593	Lbs. 102,739	16,593		
do do Pickled	United States....	Brls. 23	277	Brls. 23	277		

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ARTICLES.	COUNTRIES.	IMPORTED.		ENTERED FOR HOME CONSUMPTION.		DUTY. Amount Received.	RATE OF DUTY.
		Quantity.	Value.	Quantity.	Value.		
FREE—Continued.			\$		\$	\$ ets.	
Fish, all other, Fresh.....	United States....	2,522		2,522		.....
do do Pickled	United States ...	Brls. 23	122	Brls. 23	122	.....
do Oil, Whale.....	United States....	Galls. 2,995	2,091	Galls. 2,995	2,091	.....
do do Cod.....	United States.... Newfoundland...	Galls. 37,504 1,647	16,324 704	Galls. 37,504 1,647	16,324 704	.....
do do Other.....	United States....	Galls. 39,386	14,755	Galls. 39,386	14,755	.....
Furs or Skins the Produce of Fish or Marine Ani- mals.....	United States.... Newfoundland ... St. Pierre et Mi- quelon.....	1,899		1,899		.....
Fish and Fish Oil the product of Newfoundland : Fish	Newfoundland...	3,231		3,231		.....
do Oil	Newfoundland...	880		880		.....
		6,010		6,010		.....
		443,757		443,757		.....
		Galls. 136,754	75,427	Galls. 136,754	75,427	.....

STATEMENT showing the Quantity and Value of Fish, &c.—Dominion of Canada—*Continued.*

ABSTRACT.

COUNTRIES WHENCE IMPORTED.	ENTERED FOR HOME CONSUMPTION.			
	Dutiable.	Free.	Total.	Duty Collected.
	\$	\$	\$	\$ cts.
Great Britain.....	17,531	.....	17,531	3,008 96
United States.....	13,710	308,460	322,170	2,365 33
Newfoundland .....	.....	538,606	538,606	.....
France.....	3,542	.....	3,542	619 85
Germany.....	9	.....	9	1 57
China.....	60	.....	60	10 59
St. Pierre et Miquelon.....	.....	1,272	1,272	.....
British West Indies.....	.....	820	820	.....
Total.....	34,852	849,158	884,010	6,006 30
	\$	\$	\$	\$ cts.
Total Imports of Fish from United States.....	13,710	308,460	322,170	2,365 33
do Other Countries.....	21,142	540,698	561,840	3,640 97
Total.....	34,852	849,158	884,010	6,006 30

EXPENDITURE AND RECEIPTS.

The following statements exhibit the respective amounts expended and collected during the fiscal year ended 30th June, 1877, and the current expenses from 1st July to 31st December, 1877. The expenditure for the period first above named is subdivided for the several Provinces and services as follows :—

ONTARIO.

Fishery Overseers' salaries and disbursements.....	\$13,185 76
Fish-breeding.....	12,641 46
	<hr/>
	\$25,827 22

QUEBEC.

Fishery Overseers' salaries and disbursements.....	\$12,909 66
Fish-breeding.....	6,203 94
Fisheries protection vessel.....	17,059 21
	<hr/>
	\$36,172 81

NOVA SCOTIA.

Fishery Overseers' salaries and disbursements.....	\$15,127 49
Fish-breeding.....	3,803 53
	<hr/>
	\$18,931 02

NEW BRUNSWICK.

Fishery Overseers' and Inspector of Fisheries' salaries and disbursements.....	\$11,168 53
Fish-breeding.....	1,388 80
	<hr/>
	\$12,557 33

PRINCE EDWARD ISLAND.

Fishery Overseers' salaries and disbursements.....	\$1,974 70
	<hr/>

BRITISH COLUMBIA.

Inspector of Fisheries' salary and disbursements.....	\$635 00
	<hr/>

MANITOBA.

Fishery Overseer's salary.....	\$250 00
Total expenditure.....	\$96,348 08

And for the subsequent half-year as follows:—

Ontario, Fishery Overseers' salaries and disbursements.	\$6,386	05
Quebec do do	9,659	86
Nova Scotia do do	7,607	92
New Brunswick do do	4,654	00
Fisheries Protection Steamer "Lady Head".	15,699	96
Fish-breeding.....	12,539	89
Prince Edward Island.....	875	00
Manitoba.....	200	00
British Columbia.....	600	00
		—
Total.....	\$58,222	68

The collections during the fiscal year are arranged under the following heads:—

ONTARIO.

Rents, license fees, fines and confiscations..... \$4,483 25

QUEBEC.

Rents, license fees, fines and confiscations..... 6,071 72

NOVA SCOTIA.

Taxes on nets, fines and forfeitures..... 1,520 71

NEW BRUNSWICK.

Rents, taxes on nets, fines and forfeitures..... 1,289 17

Total..... \$13,364 85

LICENSES ISSUED.

The number of Fishery Licenses issued during the season of 1877 are as follows:—

Ontario.....	720
Quebec.....	675
New Brunswick.....	756
Nova Scotia.....	44

Also thirty-two permits were issued for salmon angling on the "Rough Waters" of the Nepissiguit River, N.B., and 1,185 season permits for angling and trolling on Rice Lake, Lake Scugog, and other inland waters set apart in the Province of Ontario; thus making the total number of Fishery Licenses issued during the present season 3,412.

Licenses for smelt and bass fishing in the Province of New Brunswick, expiring respectively on the 15th February and 1st March, no returns of the same can yet be given.

 STAFF OF FISHERY OFFICERS.

In 1876 the staff of fishery officers consisted of the following:—

ONTARIO—Fishery Overseers (<i>ex-officio</i> Magistrates) and Fishery Guardians.....	83
QUEBEC—Fishery Overseers (<i>ex-officio</i> Magistrates) and Fishery Guardians.....	90
Nova Scotia—Inspector, Fishery Overseers (<i>ex-officio</i> Magis- trate) and Fishery Wardens.....	239
NEW BRUNSWICK—Inspector, Fishery Overseers (<i>ex-officio</i> Magistrates) and Fishery Wardens.....	110
PRINCE EDWARD ISLAND—Fishery Overseers (<i>ex-officio</i> Magis- trates) and Fishery Wardens.....	32
BRITISH COLUMBIA—Inspector of Fisheries.....	1
MANITOBA—Fishery Overseer (<i>ex-officio</i> Magistrate)	1
GULF OF ST. LAWRENCE—Commander and crew of Fisheries Protection Steamer "Lady Head".....	26
	—
	582

Additions were made during the year 1877 as follows:—

Ontario.....	4
Quebec.....	5
Nova Scotia.....	4
New Brunswick.....	4
Prince Edward Island	2
Making the number of Fishery Officers now employed in the Outside Service.....	601

This regular Staff receives occasional aid from lock-masters on the Government canals and lighthouse keepers, which arrangement saves employing in certain places other Fishery Officers at separate salaries.

REPORT OF FISHERY OFFICERS.

Detailed Reports of the various Fishery Officers engaged in the service are printed in the Appendices. They embrace particulars of the year's business in each fishery district; and also give details respecting the quantity and value of fish caught in sub-divisions of the respective fishery districts. They also refer to the condition of different fishings, the state of the rivers, the observance of fishery laws, and proceedings taken for the violations of the same.

SALMON ANGLING.

The total sum accruing as rents under leases of angling privileges amounts to about \$5,000.

The salmon caught by anglers numbered 2,637, a slight decrease as compared with the catch of last year. The continued and extremely hot weather of the past season, and the lowness of the water, interfered with the sport of angling, although most of the streams contained plenty of fish. The local Fishery Overseers and Wardens report that during the autumn months the spawning beds were covered with breeding fish, and young salmon were very abundant.

FISH CULTURE.

The total expenditure on account of this service for the fiscal year ended 30th June, 1877, amounts to \$24,037.73, divided as follows among the seven establishments devoted to the artificial reproduction of fish :—

At Newcastle, Ontario.....	\$7,658 16
Sandwich do	4,374 54
Tadousac, Quebec	3,198 18
Gaspé Basin do	1,518 66
Restigouche do	954 02
Bedford Basin, Nova Scotia.....	3,488 27
Miramichi, New Brunswick.....	1,388 80
General disbursements.....	1,457 10
<hr/>	
	\$24,037 73

A statement in detail of this expenditure will be found among the Appendices. No new establishments were opened during the past season, but indispensable repairs and necessary improvements were made at Sandwich, Bedford, Miramichi and Gaspé.

The whole number of young fish distributed during the Spring of 1877, from the hatching of 1876, was 13,489,000, apportioned as follows:—

NEWCASTLE ESTABLISHMENT, ONTARIO.

Names of Rivers or Places where Fry were placed or sent.	KINDS OF FISH.		
	Salmon.	Speckled Trout.	Whitefish.
Trent River, Ontario	20,000	.....	.....
Rouge do do	10,000	.....	.....
Humber do do	20,000	.....	.....
Credit do do	20,000	.....	.....
Saugeen do do	40,000	.....	.....
Grafton Creek do	20,000	.....	.....
Barber's do do	40,000	.....	.....
Duffin's do do	20,000	.....	.....
Lynd's do do	10,000	.....	.....
Wilmot do do	1,000,000	10,000	.....
Ontario Lake do	10,000	10,000	150,000
Balsam do do	10,000	.....	.....
Clear do do	10,000	.....	10,000
Sandy do do	5,000	.....	.....
Gull do do	10,000	.....	.....
North River, County Argenteuil, Quebec	20,000	.....	.....
Magog do do Stanstead do	10,000	2,000	.....
To Lord Exeter, England.....	5,000	2,000	30,000
" Prof. Buckland, England, per Alex. Begg.....	5,000	.....	.....
" Prof. Baird, United States.....	6,000	.....	.....
" New York do	4,000	.....	.....
" State of Wisconsin do	5,000	.....	.....
" do Iowa do	5,000	.....	.....
" Seth Green, Caledonia do	5,000	.....	.....
" B. Tett, Esq., Newboro', Ontario.....	.....	.....	10,000
Total	1,310,000	24,000	200,000

SANDWICH ESTABLISHMENT, ONTARIO.

Name of Rivers or places where Fry were placed.	KINDS OF FISH.		
	Salmon.	Speckled Trout.	Whitefish.
Detroit River, Ontario.....			7,750,000

BEDFORD ESTABLISHMENT, NOVA SCOTIA.

Sackville River, County Halifax, N.S.....		150,000	.....
Shubenacadie River do		50,000	.....
Musquodoboit do do		50,000	.....
Gays do do		20,000	.....
Indian do do		20,000	.....
Ingraham do do		20,000	.....
North East do do		10,000	.....
Little Salmon do do		10,000	.....
Moshers do do		10,000	.....
Nine Miles do do		20,000	.....
Meander do County Hants, N.S.....		20,000	.....
Windsor do do		20,000	.....
Gaspareaux do County Kings, N.S.....		20,000	.....
Cornwallis do do		20,000	.....
Philip do County Cumberland, N.S		100,000	.....
Wallace do do		40,000	.....
Pugwash do do		25,000	.....
Annapolis do County Annapolis, N.S		50,000	.....
Salmon do County Colchester, N.S		60,000	.....
Stewiacke do County Colchester, N.S		25,000	.....
North do do		25,000	.....
Debert do do		20,000	.....
West do County Pictou, N.S		50,000	.....
East do do		50,000	.....
Middle do do		50,000	.....
Sutherland's do do		20,000	.....

BEDFORD ESTABLISHMENT, NOVA SCOTIA.—*Concluded.*

Name of Rivers where Fry were placed.	KINDS OF FISH.		
	Salmo Salar.	Speckled Trout.	Whitefish.
Martin's River, County Lunenburg, N.S.....	6,000	.....	.....
Gold do do	4,500	.....	.....
Middle do do	4,500	.....	.....
Tracadie do County Guysboro', N.S.....	20,000	.....	.....
Total.....	990,000	.....	.....

TADOUSAC ESTABLISHMENT, QUEBEC.

River St. Thomas, Quebec.....	150,000	.....	.....
do Ouelle do	150,000	.....	.....
do Du Loup do	60,000	.....	.....
do Malbaie do	60,000	.....	.....
do A. Mars do	200,000	.....	.....
do St. Jean do	200,000	.....	.....
do Petit Saguenay do	60,000	.....	.....
do Ste. Marguerite do	300,000	.....	.....
do Escoumains do (California Salmon).....	5,000	.....	.....
Total.....	1,185,000	.....	.....

GASPÉ BASIN ESTABLISHMENT, QUEBEC.

Dartmouth River, Quebec.....	550,000	.....	.....
St. John do	313,000	.....	.....
Malbay do	108,000	.....	.....
Pabos do	80,000	.....	.....
Total	1,051,000	.....	.....

RESTIGOUCHE ESTABLISHMENT, QUEBEC.

Name of Rivers or Places where Fry were placed.	KINDS OF FISH.		
	Salmo Salar.	Speckled Trout.	Whitefish.
Jacquet River, New Brunswick.....	50,000	.....	.....
Upsalquitch do	150,000	.....	.....
Nouvelle, Quebec.....	50,000	.....	.....
Little River do	50,000	.....	.....
Main Matapedia, do	50,000	.....	.....
Causapschal do	55,000	.....	.....
Restigouche do	255,000	.....	.....
Total.....	660,000	.....	.....

MIRAMICHI ESTABLISHMENT, NEW BRUNSWICK.

South-West Miramichi River, N.B	50,000	.....	.....
North-West do	50,000	.....	.....
Little South-West do	50,000	.....	.....
Sevogle River, N.B.....	20,000	.....	.....
Bartibog do	20,000	.....	.....
Burnt Church River, N.B.....	20,000	.....	.....
Tabusintac do	20,000	.....	.....
Napan do	20,000	.....	.....
Black do	20,000	.....	.....
Salmon do	20,000	.....	.....
Shediac do	20,000	.....	.....
On hand (for experiments).....	9,000	.....	.....
Total	400,000	.....	.....

RECAPITULATION.

			KINDS OF FISH.		
Fish-Breeding Establishments.			Salmon.	Speckled Trout.	Whitefish.
Newcastle Fish-Breeding Establishment, Ontario.....			1,310,000	24,000	200,000
Sandwich do	do		.....	.....	7,750,000
Bedford do	N. S.		990,000	.....	.....
Tadousac do	Quebec		1,185,000	.....	.....
Gaspé do	do		1,051,000	.....	.....
Restigouche do	do		660,000	.....	.....
Miramichi do	N. B.		319,000	.....	.....
Total distribution in 1877.....			5,515,000	24,000	7,950,000
Salmon			5,515,000		
Speckled Trout.....			24,000		
Whitefish.....			7,950,000		
Grand Total.....			13,489,000		

The following number of vivified eggs were deposited on the hatching-troughs at the above named establishments in the fall of 1877:—

Establishments.	Salmon.	Sea and Brook Trout	Whitefish.	Salmon Trout.
Newcastle, Ontario. { Lake Ontario, Salmon.....	750,000	50,000	1,000,000	.....
California, do	40,000	.....	.....	1,300,000
Sandwick do			30,000,000	.....
Gaspé, Quebec	750,000	.....	.....	.....
Tadousac, Quebec.....	1,500,000	100,000	.....	.....
Restigouche, Quebec.....	1,260,000	.....	.....	.....
Bedford, N.S.....	1,400,000	.....	.....	.....
Miramichi, N.B.....	710,000	.....	.....	.....
Total.....	6,350,000	150,000	31,000,000	1,300,000

Making a grand total of 38,800,000 fish ova now in these establishments, which will be hatched during the spring of 1878, and be ready for distribution during the month of June next.

EXTENSION OF FISH HATCHING.

Enlarged experience in the cultivation of fish serves to convince us that the time has arrived to substitute in great part artificial methods of reproduction for the natural conditions. There can be no longer any doubt of the material advantages of this prolific system. An extensive scheme of fish culture should now be applied throughout the Dominion. The process is simple, the operations speedy, and the results certain. In these respects the artificial and natural courses are widely different. The latter, under prevailing circumstances, is slow and uncertain. Every attempt therefore to raise inland fisheries to a highly productive state must necessarily be attended with more or less of disappointment. It is impossible to conceal the fact that these attempts involve numerous difficulties of an almost insurmountable nature. The difficulty of dealing with the pressing necessities of our fishing communities; the impossibility of restoring our breeding streams in settled districts to their normal capacity; climatic obstacles, and particularly the peculiar circumstances of our manufacturing industries; all these present hindrances to improvement which are most formidable, if not indeed practically insuperable. The substitution of a powerful reproductive system would, in some measure, obviate the necessity for enforcing many of the obligations on fishermen and manufacturers which are considered burdensome and unpopular. If this change can be successfully worked, the probable and early effect will be to greatly increase fish food in our markets, and afford livelier occupation to fishermen. Such benefits would be more appreciable when unaccompanied by most of the drawbacks which attend the present restrictions on the precarious calling of fishermen necessarily imposed by the fishery laws.

OBJECTIONABLE MODES OF FISHING.

The modes of fishing most objectionable amongst the fishermen, and not provided against by our fishery laws, are purse seines and trawls. Their use has been petitioned against from several sea coast districts. It is not desirable to interfere with either until further enquiries and more particular observations can be made.

SHELL FISH FISHERY.

There is an urgent necessity for attending more strictly to the preservation of the lobster fishery and restoration of the oyster fishery.

BRITISH COLUMBIA AND MANITOBA.

Fishery regulations for these Provinces ought to be adopted before next season commences. There should be as few restrictions applied as possible, and only such parts of the fishery laws enforced as the urgency of the case requires.

SAWDUST AND MILL RUBBISH.

Remarks made in last year's report are equally applicable at present. Mr. Mather's report on the Ottawa mills, published herewith, explains what was done respecting these establishments. The principal recommendations made have since been carried out. Although this examination applies especially to manufactories in the vicinity of Ottawa, it affects similar cases in other sections of the Dominion. Where like conditions exist it is desirable to adopt the same suggestions.

FISHERIES STAFF.

Although the outside staff of fishery officers has been considerably enlarged in the course of last year, it is necessary to provide Overseers and Wardens in several other places where the importance of protecting fish has become better known. The inside staff, though very efficient, is insufficient for the largely increasing duties which devolve on the Fisheries Branch of your Department.

I have the honour to be, Sir,

Your obedient servant,

W. F. WHITCHER,

Commissioner of Fisheries.

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No. 2.—FISH-BREEDING.

No. 3.—REPORT ON SAWDUST AND MILL OFFALS.

APPENDIX No. 1

TO THE

REPORT OF THE COMMISSIONER OF FISHERIES.

REPORTS

— OF —

FISHERY OFFICERS

IN THE

DOMINION OF CANADA,

1877.

Printed by Order of Parliament.



OTTAWA :

PRINTED BY MACLEAN, ROGER & CO., WELLINGTON STREET.

1878.

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TO THE

REPORTS OF FISHERY OFFICERS

IN THE DOMINION OF CANADA.

For the Year 1877.

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No. 1.

REPORT ON THE CRUISE OF THE GOVERNMENT STEAMER "LADY HEAD," IN THE PROTECTION OF THE FISHERIES OF THE GULF AND RIVER ST. LAWRENCE, DURING THE SEASON OF 1877, UNDER COMMAND OF NAPOLEON LAVOIE, Esq., FISHERY OFFICER.

L'ISLET, 31st December, 1877.

To the Honourable A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

Sir,—I have the honour to transmit herewith my Ninth Annual Report on the result of the cruise of the Steamship "Lady Head" in the waters of the Gulf and Lower St. Lawrence, for the past season.

DATE OF THE DEPARTURE OF THE FISHERIES PROTECTION STEAMER FROM QUEBEC.

The necessary repairs being completed, we left Quebec on the 15th May, but having met with a strong breeze of easterly wind, accompanied by fog and rain, we were compelled to lay over for two days and two nights at Brandy Pots. This unavoidable delay enabled us to fix everything on board, which could not be done in the hurry of departure.

On the 19th, the fog having cleared, we steamed out, and about the evening anchored at Trinity Bay, where we landed the Local Fishery Guardian. Having gone ashore and ascertained how things stood in this locality we heaved anchor, and on the morning of the 21st reached Magdalen Islands, the first object of our destination.

Our cruise lasted a little over five months and a half. During that period we visited Magdalen Islands three times, Anticosti three times, the coast of Labrador once; the north shore, from Kegashka to Point des Monts, three times; Bay des Chaleurs four times, and the shores of Gaspé three times. Besides these official visits, our vessel was engaged for a period of about five weeks in the performance of duties connected with the Fisheries Commission then sitting at Halifax.

I need not repeat what I have already said in my last annual report respecting the employment of a suitable vessel in the Fisheries protection service. The advantages of a steamer over a sailing vessel are so apparent that I merely allude to the matter in order to have an occasion to again thank you on behalf of the Gulf and Lower St. Lawrence population for this mark of attention on the part of the Government.

GENERAL REMARKS ON THE GULF FISHERIES DURING THE SEASON OF 1877.

COD FISHERY.

Although the arrival of cod was somewhat delayed in the spring, the fish came in abundance; but had it not been for a successful catch during the summer, our fishermen would fare very poorly. In 1876, fall fishing was carried on from August until November, whilst this season it amounted to almost nothing during the same period. The total catch is, however, superior to that of last year. In 1876, the Gulf divisions under my charge yielded 222,096 quintals, including the fish caught by about one hundred foreign vessels. This season, the total catch amounts to 186,222 quintals, without reckoning the catch of one hundred and fifty foreign schooners, which, being rated at five hundred quintals per vessel would give 75,000 quintals more. With respect to the value, it must be borne in mind that the price of cod fell at least one-fourth this season.

SALMON FISHERY.

Salmon fishing was good, the catch being even greater than that of last year. The yield in 1876 amounted to 3,140 barrels, against 3,235 this season, besides fish caught by anglers. Pickled fish sold at about the same price as last year, but fresh salmon was rated at a higher figure.

MACKEREL FISHERY.

Mackerel fishing is principally carried on at Magdalen Islands and Gaspé Bay. Although the catch at the former place may be somewhat below that of last season, fishermen agree in stating that the fish were more abundant than usual, and more generally scattered over the Gulf shores; the catch amounting to 5,339 $\frac{1}{2}$ barrels against 4,975 in 1876. On the coasts of Labrador, Gaspe and Anticosti, it amounted to 410 barrels, when only six barrels were caught last year. The fish sold at prices ranging from \$10 to \$14.

HALIBUT FISHERY.

As our fishermen do not carry on this pursuit in a regular and practical manner, the yield cannot be expected to be very large. The catch amounted to 227 $\frac{1}{2}$ barrels this season, against 183 in 1876. Two-thirds of the fish were caught in the neighborhood of the Island of Anticosti.

HERRING FISHERY.

Circumstances proved very unfavorable this spring for the successful carrying on of herring fishery at Magdalen Islands; the result being a falling off of over one-third. The same thing occurred on the north shore, where the weather also kept stormy. I was, however, informed that at Washeecootai, early in the spring, about twenty schooners secured full cargoes of fish. We have no reliable statistics from this part of the coast, the local Fishery Overseer finding it impossible to be there so early in the season. Foreign vessels took 14,400 barrels of fish at Fox Bay.

The total catch amounts to 63,229 barrels, against 96,701 in 1876.

SEAL FISHING AND HUNTING.

Although fishing with nets was highly successful, seal hunting on the ice by schooners was so poor that the total yield amounts to only 13,097 seals, against 24,369 killed in 1875, and 9,615 in 1876.

WHALE FISHERY.

Our whalers having unfortunately failed to visit the favoured grounds this season, the whale fishery yielded only 13,716 gallons of oil, against 9,618 last year.

LOBSTER FISHERY.

It will be sufficient to state here that 450,669 pounds of lobsters were put in cans this season, against 245,335 pounds last year, in order to enable you to understand the immense development of this industry, and the dangers to be guarded against for the future.

Taken as a whole, this season's fishing may be called good, at least so far as applies to the yield. With regard to the value, the results are not quite so satisfactory when compared with the quantity of fish caught.

The following table will show at a glance the increase and decrease in the yield and value of each particular fishery. For more ample details the statistics published at the end of each division may be consulted.

COMPARATIVE STATEMENT of the value of the several fisheries in the Gaspé, Bonaventure, Labrador, Magdalen Islands and Anticosti Island Divisions, during the years 1876 and 1877.

KINDS OF FISH.	Quantities.		Value.	
	1876.	1877.	1876.	1877.
			\$ cts.	\$ cts.
Cod, Summer fishing.....Qntls.	181,165	223,596	905,825 00	1,117,980 00
" Autumn "....."	40,931	37,626	204,655 00	188,130 00
Herring, pickled.....Brls.	96,701	63,229 ²	386,306 00	316,147 50
" smoked	Boxes.	832	700	175 00
Mackerel, pickled.....Brls.	4,975	5,339 ²	49,750 00	53,395 00
" preserved in cans.....Lbs.		960		144 00
Haddock.....Qntls.	347	248	1,735 00	1,240 00
Ling	" 1,149	99	5,745 00	495 00
Halibut.....Brls.	183	227 ²	1,098 00	1,365 00
Salmon, pickled....."	2,216	2,232 ²	35,456 00	26,790 00
" fresh, in ice.....Lbs.	267,276 ²	326,548	13,363 83	16,327 40
" preserved in cans....."	50,901	100,605	7,635 15	15,090 75
" smoked	Boxes.	1	1	4 00
Trout.....Brls.	163 ²	276 ²	1,308 00	2,212 00
Eels	" 47	23	470 00	230 00
Sardines....."	" 8	60	40 00	300 00
Tunny	"	2		10 00
Lobsters, preserved in cans.....Lbs.	245,335	450,669	36,300 25	67,600 35
" fresh	" 5,000			250 00
Other fish.....			500 00	
Cod Tongues and Sounds.....Brls.	177	234	1,593 00	2,106 00
Seal Skins	Pieces.	9,615	13,097	12,018 75
Porpoise Skins	"	10	12	16,371 25
Seal Oil	Galls.	51,585	58,470	40 00
Porpoise Oil....."	"	20	95	48 00
Whale Oil....."	"	9,618	13,716	25,792 50
Cod Oil....."	"	118,271	224,875	29,235 00
Fish and Clams used as bait and manure.....Brls.	56,160	181,596	4,809 00	76 00
Fish used as local consumption....."		11,554 ²	59,135 50	6,858 00
Total			28,080 00	112,437 50
Increase.....				181,596 00
				46,218 00
			1,782,870 98	2,202,831 75
				1,782,879 98
				\$419,951 77

IMPORTANCE OF QUEBEC FISHERIES.

I make it my special duty on every possible occasion to draw the attention of the public to the importance of the Quebec fisheries.

The Gulf covers an immense area; its waters, as well as those of the shores and estuaries, are crowded with cod, herring, mackerel, salmon, lobsters and halibut; whilst seal and whale-hunting engage the attention of a large number of hardy seamen. The wealth of our gulf and river was known long before the discovery of Canada by Jacques Cartier, in 1535, and seamen hailing from Biscay and La Rochelle used to repair to the coasts of Labrador and Newfoundland for the purpose of cod fishing. This great source of fortune did not fail to attract public notice. French and English were soon engaged in quarrels about its possession; the end of which was that each nation succeeded in securing a share, and numerous foreign fleets now

repair every year to our waters; their cargoes being sent to European and South American markets. The increased accommodation in shipping, as well as the construction of the Intercolonial Railway, have placed the products of our Gulf fisheries within the reach of everyone.

We must not, thus far, rest satisfied with the progress made and be under the impression that the acquired advantages are sufficient. In connection with this matter, I shall take the liberty to make a suggestion, and to recommend to our ship-builders the advisability of fitting out vessels provided with refrigerators, by means of which salmon, trout, lobsters and oysters, may be shipped fresh to European markets and reach them in all their natural delicacy and flavour. A French company was lately started with this end in view. They own a steamship called "Le Frigorifique," which carries fresh meat from the shores of La Plata to Rouen, in France. Complete success appears, so far, to have crowned this venture. Why could we not do the same with our salmon, halibut, trout, lobsters, oysters, &c., &c.? At any rate, the experiment is worth trying, and this is why I take the liberty to bring it under the notice of shipbuilders and capitalists.

GASPÉ AND BONAVENTURE DIVISION.

Having already, in previous reports, drawn the attention of your Department to the wealth and abundance of our deep sea and inshore fisheries, I need not repeat these remarks here.

The Division of Gaspé and Bonaventure covers an extent of coast of two hundred and twenty-four miles. It was frequented in the remotest times by the people who first settled in our colony. It is unnecessary to allude here to the hardships and difficulties which these intrepid pioneers must have experienced at the outset. Remoteness from the civilized world; long winters; internal dissensions; want of succor, when needed; attacks by filibusters and pirates, were some of the difficulties which they had to overcome. But what did all this matter to them? Their mission was to open these countries to faith and civilization, and boldly and fearlessly they pushed on their way, in order to accomplish the work which Providence had assigned to them. Their labours were fruitful. Rich harvests, magnificent farms, colonization roads and telegraph lines sprung up as by enchantment where nothing but solitude existed at first; and let us hope that a railway line skirting the coasts of Bay des Chaleurs will soon enable this region to become one of the richest and most productive in our Dominion.

In the midst of these improvements which, it will be readily understood, were slowly realized, owing to peculiar reasons, commerce also progressed rapidly, the fish trade, especially, which is pursued on a large scale through the whole of that coast. Amongst the most recent additions made in that branch of business, is the opening of salmon and lobster canneries, for the carrying on of which this coast offers special inducements.

Although cod fishing, which is the industry upon which inhabitants of this Division mostly rely upon for a living, was more successful than last year, yielding very satisfactory results; fishermen were evidently not in such desirable circumstances this fall as in 1876. This is due to a decline in the price of fish, as well as to a failure in the fall fishery, which is the means upon which fishermen mostly rely upon for their winter supplies.

The most successful portion of this Division was from Gaspé to Restigouche. It must, however, be borne in mind that on that part of the coast of Gaspé the catch of salmon, which was unprecedently successful, must be added to the yield of the cod fishery. The cannning establishments also help to improve the position of the inhabitants, by causing a circulation of money among them. The prices of all fish, other than herring and cod, will always be good on that part of the coast, owing to ready markets, easy communications and increased competition.

When speaking of each fishery in particular, I shall enter into more detailed statements.

COD FISHERY.

The Gulf of St. Lawrence is at various periods of the year frequented, in greater or lesser numbers, by various specimens of fish and different kinds of amphibious animals. This fact greatly adds to its natural wealth, and causes an increase of floating population towards its shores during the time when fishing pursuits are carried on. It is in accordance with this rule, I presume, that seals and whales are met with when herring and mackerel frequent other parts of the coast; but a period arrives when the fish either disappear or retire. Such, however, is not the case with cod. It can be found in the waters of the Gulf during the whole year round; thus giving employment to a large number of the fishing population of this division.

The great extent of the Canadian fishing grounds, and above all, their inexhaustible wealth, are not sufficiently appreciated by our own people; men of education who visit the coast of Gaspé for the first time, cannot sufficiently express their wonder at seeing such abundance, and are compelled to own that its shores might afford a comfortable living to thousands of adventurers who would find there sources of wealth more accessible than the gold mines of California, and secure more prosperity than could afford wages paid for working in unhealthy manufactories of the United States.

No less than 6,729 men and sailors were engaged this season in fishing for cod, without taking into account about as many people employed ashore in the preparation of fish. The catch amounted to 110,494 quintals, to which must be added the fish used for local consumption. The yield in 1876 amounted to 99,626 quintals.

Cod fishing in this division is practised along shore and on the banks, situated at distances varying from two to three miles from shore. Fishermen, from Cape Cove to Newport boldly repair to the Green, Orphan and Miscou banks, whilst those of Bonaventure Island and Percé, also undertake dangerous voyages, which seldom prove unsuccessful, should fair wind allow them to cross over in their frail boats.

Hardly any season passes without our having to deplore the loss of some lives. Several fishermen were again wrecked this season: a steamer having, in one instance, run over a boat, and in others the men were carried to sea by stress of weather. How numerous are the tales of sorrow and hardships related during the long winter nights, and how painful the record of wrecks and losses of life which bring distress and affliction amongst such a large number of families in a village!

Gaspé fishermen now understand the advantages to be derived from having vessels of a larger tonnage which would enable them to go out on the banks and carry on fishing in the same manner as is done by fishermen from the States, France and the Maritime Provinces; but want of capital has thus far prevented them from doing so; and the system of trade pursued on the coast is not such as to encourage the development of an industry which might enable fishermen to choose their own market and give them greater independence. I do not, however, despair of seeing some day an arrangement of this kind inaugurated on our coasts, when fishermen will club together for the purpose of establishing fishing and building societies, and thus become as independent as their neighbours.

I mentioned in my report of last year that Newfoundland fishermen had for a long time given up bank-fishing to engage wholly in shore-fishing; but cod being sometimes scarce on the shores of that Island, as well as on those of Gaspé, owing either to their being over-fished or not finding their usual food, the people soon understood that their best interests consisted in fitting out vessels for the bank fishery where cod never fails by reason of its always finding there an abundance of food. The first ventures cannot certainly be called a perfect success, but preparations are being made on a larger scale this season, and proper vessels will be built.

I need not say any thing further on this point, but simply remark that, whatever causes may influence the migration of cod, thousands of physical reasons such as the temperature of the water, winds, currents, tides and rain may also have something

to do with the motions of the fish, and either hasten or delay their appearance on our shores. Thus does it happen that sometimes they will strike at Gaspé as early as May, whilst at other seasons their arrival is delayed until the month of June. Cod-fishing usually begins in May. Still, for two seasons past, no fish were caught before June; although capelin and herring arrived at their proper time. This fact might be adduced as a proof that the migration of cod from deep water towards the fishing grounds is not influenced simply by the motions of food fishes, but that the above mentioned causes may possibly have something to do with their migrations. The cold temperature of the water undoubtedly delayed the arrival of cod during the past two seasons; the ice having remained till the end of May on the shores of Gaspé and Bay des Chaleurs. On the coast of Labrador, which were free from ice in March, fish struck one month earlier than usual.

Cod formerly used to ascend as high as Rimouski, in the River St. Lawrence and Maguasha, in the Bay des Chaleurs. I have, however, some reason to apprehend that the inconsiderate destruction of small fish upon which they used to feed and which are employed as bait, may have been the principal cause of their abandoning these localities. Similar results are being experienced on the shores of the United States, and at several places on the coast of the Maritime Provinces. A few fish may be caught now and then at Matane, and they are very seldom found higher up than Carleton.

Although the arrival of cod was somewhat delayed this spring, the catch was far from being a bad one. Fishermen had hardly been able to do anything last year, until the month of August; this season, however, the fish struck so early and in such abundance from Cape Chatte to Bonaventure that summer fishing was highly successful, especially from Grand Grève to Paspebiac. The total yield is not, however, very large. Had fall fishing been equally good as in 1876, the result would have been different; but bait either entirely failed towards the latter part of July or else became so scarce that it could be procured only with great difficulty. Between Cape Rosier and Mont Louis, boats remained idle during whole weeks, being unable to go out, and when fall arrived they were prevented from fishing by stormy weather, although fish were quite abundant on the grounds.

It is when bait becomes scarce that one can better appreciate the lasting injury done to inshore mackerel fishery by United States fishermen. When capelin and herring had left the shore about the latter end of July, and before squid had arrived, our fishermen formerly relied on mackerel which is an excellent bait for cod at this period of the year. Boats would leave their moorings without any bait on board, relying upon a sufficient catch before reaching the fishing grounds, so as to secure a good day's fishing in a short time, and a sufficient quantity of mackerel besides for family use, and even for sale. These times are unfortunately now gone, and one can hardly over estimate the injury thereby occasioned to our people when it is borne in mind that as many as from fifteen to eighteen hundred boats were compelled to lie idle during three or four weeks of the best fishing time for want of that indispensable article, bait.

The localities where codfish struck in greater abundance were at Gaspé, Bonaventure Island, New Richmond and Port Daniel. Some of the boats caught as many as 225 drafts; the average catch being 100 drafts per boat. Fishermen on this part of the Gaspé Division usually repair to the Miscou Banks where fish were usually abundant this season; inshore fishing was, however, good, and in no way inferior to bank fishing. From Anse au Gris Fond to Cape Chatte there are no banks to be met with as at Miscou. The currents are, moreover, so strong and the weather generally on stormy that fishing can hardly at times be carried on; the summer catch was however good. It was especially so at Grand Etang. Bait also fails oftener on that part of the coast than elsewhere, and I am afraid the people of these localities have nobody else to blame but themselves for this state of things. They mostly all follow farming as well as fishing, and in order to improve their lands, use small fish for manure; this easily explains the reason why difficulty is sometimes experienced in procuring sufficient bait for codfishing. At Ste. Anne des Monts, especially, where

small fish have been destroyed by thousands of barrels, no bait could be found ; and fishermen had to cross over to the other side, a distance of some fifty miles, to procure clams which thus became a very expensive article. With the exception of a few small trout used for that purpose, all the fishing done at Ste Anne des Monts and Cape Chatte was done with clams.

The statistics annexed to this report show that the catch cod in this division amounted to 110,494 quintals more than in 1876, without reckoning fish used for home consumption. Fishermen are, however, in poorer circumstances than last season, especially those who depend entirely upon fishing for a living. The fish realized only from three dollars to three dollars and a half, although later in the fall, prices went up to four dollars for choice lots.

Every one is aware of the fact that the summer catch is always due beforehand to merchants, for goods and provisions ; there remains, therefore, only the fall fishing to procure winter supplies. When this pursuit fails, as it did last season, owing to stormy weather or other causes, one can readily imagine the state of dismay in which people are placed. Loud complaints were therefore heard from fishermen who have nothing else to depend upon but their fishing, especially among those residing between Cape Rosiers and Mont Louis.

The Gaspé fish is sent to foreign countries ; to Italy when number one, and to the Western Islands and Brazil when of inferior quality. For a long time this fish, as well as that caught on the coast of Labrador, were the only kinds which fetched remunerative prices on the above markets ; but I understand that Norway is now making a brisk competition to Canadian codfish.

Codfishing is practised on the coast of Gaspé by means of hand-lines and bultows. There is a good deal of outcry against the latter mode of fishing, and I am yearly besieged with complaints from fishermen urging that the decrease in their catch or the disappearance of the fish is due to these engines, by reason of their destroying the mother fish. These very people, however, who cry loudly against bultow fishing are engaged in practices which I consider far more injurious. Take for instance the destruction of bait or small fish which are indiscriminately used for the purpose of manuring lands, and which are destroyed by thousands of barrels. At Ste. Anne des Monts alone, no less than 24,916 barrels of capelin were used for this purpose during 1876 and 1877. If, as the thing is self-evident, fish are local in their habits, and always return, when not otherwise impeded, to their birth places, is it to be wondered that they will cease visiting certain localities where their usual food has been destroyed ? Neither can people be made to understand the injurious effect of another practice which they follow ; that of throwing the offals of fish along shore. They pay no attention whatever to the matter, although I am sure that the formation of deleterious gases resulting from decayed matter, must necessarily drive fish away from their former favourite haunts.

The fishery statistics, published every year, fail to show any appreciable decrease in the number of cod frequenting the waters of the Gulf ; and no one can claim that fish of three or four years' growth cannot reproduce as well as larger ones. Were it alleged that bultows injure fishing with hook and line when both pursuits are carried on side by side, or upon the same grounds, I would readily believe it ; the fish being possibly attracted by bait laid at a few inches from the bottom, would remain there and decline to look at hand lines. But, as both these modes of fishing are distinct, I cannot understand how one can possibly interfere with the other. Seine fishing, I should say, ought to have proved far more injurious, were not cod still most abundant on the coast of Labrador and in localities where these engines have been in use for hundreds of years.

Gaspé Basin and Paspebiac are the great fish emporiums of the coast of Gaspé. Besides these advantages as sea ports, they also prove very attractive to pleasure seekers and invalids in search of health. Gaspé formerly enjoyed the advantage of a flourishing lumber trade, which brought abundance and activity to its door, but a succession of bad years has ruined this business. The increase in the fish trade is, however, held as a sort of compensation. Thirty vessels took cargoes of fish this

season at the former place, consisting of 16,002 quintals of dry codfish, and 30,628 tubs for the West Indies. A tub is reckoned as weighing one quintal and a fourth of dry cod, but of inferior quality. Paspebiac exhibits the following return: 33 vessels with cargoes of 65,221 quintals of cod; 2,357 quintals of haddock; 25 barrels of green codfish; 324 barrels of cod roes; 5,875 barrels of cod sounds; 30,862 gallons of oil, and 1,106 barrels of cod tongues—all sent to foreign markets.

RETURN of Vessels engaged in the Fish Trade which took Cargoes at Gaspé in 1877.

PORT OF GASPE.

Name of Vessel.	Tons.	Name of Master.	Destination.	Contents of Cargo.	Value.
Dewdrop	101	John Romeril.....	Barbadoes.....	1,655 tubs Codfish.....	\$ 6,620 00
Hon. H. Langevin..	90	Abraham Hacquoil.....	do	745 do do	6,725 00
Standard.....	93	Thos. LeScelleur.....	do	934 do do	4,836 00
Warrior	93	C. P. Renouf.....	Vienna.....	2,175 quintals Codfish.....	9,112 00
Snowdrop	149	J. Butel.....	Rio de Janeiro...	2,382 tubs Codfish.....	16,674 00
Aura.....	93	James Venement.....	do	1,517 do do	9,282 00
J. L. B.....	148	Thos. Robson.....	Barbadoes.....	1,286 do do	12,123 00
Brothers	173	J. A. Vibert	Peraambuco....	2,442 do do	14,600 00
Scud.....	70	Peter Couper.....	Civita Vecchia.....	1,940 quintals Codfish.....	7,760 00
Orient Star.....	95	Peter Sohier	Ancona	2,746 do do	10,984 00
Cornucopia.....	155	P. LeBoutillier.....	Rio de Janeiro...	2,171 tubs Codfish	10,900 00
Standard.....	93	Thos. LeScelleur.....	Naples	1,991 quintals Codfish.....	7,964 00
Eclat	96	Sam Ellery.....	do	2,502 do do	10,008 00
Graphic	59	Ph. LeScelleur.....	Civita Vecchia.....	1,648 do do	5,768 00
Vitula.....	146	Frs. LeCouteur.....	Brazil	2,331 tubs Codfish.....	11,655 00
Dewdrop.....	101	Jno. Romeril.....	Rio de Janeiro...	1,570 do do	7,900 00
Snowdrop.....	149	Jno. Butel.....	do	2,430 do do	14,580 00
Village Belle.....	137	J. Braddon.....	do	1,988 do do	11,928 00
Ocean Queen.....	149	G. Cantall.....	do	2,269 do do	11,345 00
St. Breland.....	99	P. Alexander.....	Naples	2,251 quintals Codfish.....	10,207 00
Aura	93	Jas. Venement.....	do	2,348 do do	11,740 00
Juventa	151	Ph. Filleul.....	Ceara	2,193 tubs Codfish	10,965 00
Alliance.....	115	A. Hacquoil	Vienna.....	{ 2,495 quintals Codfish } { 2,000 Staves..... }	12,595 00
J. L. B.....	148	Thos. Robson.....	Jersey	2,700 quintals Codfish.....	10,800 00
Milton.....	140	J. Laventine.....	Rio de Janeiro...	2,210 tubs do	13,260 00
Dawn.....	154	P. J. Collas.....	Pernambuco....	2,374 do do	11,870 00
Brothers.....	173	J. A. Vibert	Jersey	Fish and Oil &c.....	13,360 65
Warrior.....	93	P. Renouf	do	do	7,381 00
Edward Vittery ..	119	David Baird	Lisbon	2,206 quintals Codfish.....	8,826 00
Glen.....	55	Wm. Roberts.....	Shippegan.....	900 do do	3,600 00

RETURN of Vessels engaged in the Fish Trade which took Cargoes, &c.—*Continued.*

PORT OF PERCÉ.

Name of Vessel.	Tons.	Destination.	Contents of Cargo.	Value.
				\$ cts.
Heroine.....	97	Barbadoes.....	1,500 cwt. Codfish.....	6,200 00
do	97	do	70 barrels Herring.....	280 00
do	97	do	21 do Coal Oil.	100 00
Victoria.....	135	Bahia.....	2,500 cwt. Codfish.....	13,150 00
Island Queen.....	78	Barbadoes.....	950 do	4,700 00
do	78	do	60 barrels Herring.....	180 00
do	78	do	980 gallons Coal Oil.....	196 00
Zingara.....	174	Bahia	2,680 cwt. Codfish.....	14,112 00
Heroine.....	97	Vienna.....	2,420 do	12,000 00
Aura.....	93	Italy <i>via</i> Gaspé.....	160 do	640 00

OUT OF THE DOMINION.

RETURN of all Ships and Vessels that have Cleared Outwards with Fish only, Season 1877.

PORT OF NEW CARLISLE.

Date of Report.	Name of Vessel.	Tons.	Men.	Where Bound.	Codfish, Dry, in quin-tals.	Codfish, Dry, in quin-tals.	Cod Roe's, in barrels.	Herring, Pickled, in barrels.	Cod Oil, in galls.	Cod Tongues, lbs.	Salmon, Pickled, in barrels.	Oysters, in barrels.
1877.												
May 18.....	Carmelo	95		Barbadoes.....	2,878							
do 29.....	Century	181	8	Rio Janeiro.....	1,944							
June 7.....	Ranger	137	8	do	10							
do 13.....	Seaflower.....	352	13	Jersey	240							
do 13.....	Dit-on.....	78	5	Oporko.....	1,170							
do 18.....	Robin	150	8	Barbadoes...	2,228							
do 28.....	O. Blanchard.....	260	11	do	2,000							
July 3.....	(" 85)	139	8	do	30							
do 5.....	Reaper	137	8	do	1,356							
do 11.....	Homely	229	9	do	1,400							
do 13.....	M. Georgiana.....	98	6	St. Vincent	392							
do 23.....	C. R. C.....	248	10	Barbadoes.....	69							
Aug. 6.....	Union	193	10	Rio Janeiro.....	1,156							
do 23.....	Hebe	236	10	Rio Janeiro.....	95							
Sept. 3.....	Dit-on	78	5	Italy	278							
do 6.....	O. Blanchard.....	260	11	Rio Janeiro	3,013							
do 8.....	Marsalline.....	143	3	Boston.....	555							
do 12.....	Industry	76	7	Rio Janeiro	1,800							
do 17.....	Hemeotope	76	5	Italy	4,171							
do 27.....	Century	181	8	Rio Janeiro	612							
Oct. 6.....	Homely	229	9	do								
do 10.....	Robin	150	8	Naples								
do 10.....	C. R. C.....	248	10	Rio Janeiro								
do 26.....	Ranger	137	8	Oporko								
do 27.....	Reaper	137	8	Italy								
do 30.....	Albion	170	7	Bahia								
Nov. 7.....	" (85)	139	8	Naples	2,688							
					2,256							
					534							180

A RETURN of all Ships and Vessels that have Entered Inwards, Coastways, with Fish only, Season of 1877.

PART OF NEW CARLISLE.

Date of Report.	Names of Ships.	Tons. Men.	From whence.	Codfish, Dry, in quintals, Dr., in gallons.	Cod Oil, in gallons.	Lime, Dry, in quin- tals.	Cod Liver Oil, doz. bottles.	Haddock, Dry, in quintals.	Lime, Dry, in quin- tals.	Oysters, in barrels.	Seal Oil, in gal- lons.	Berthing Oil, in gal- lons.	
1877.													
May 12....	Ranger.....	137	Percé.....	330									
do 19....	Century.....	181	Arichat.....	1,152									
June 1....	Swallow.....	34	do	477									
do 2....	Dit-on.....	78	Percé	250									
do 11....	Beaver	15	Carasquet	450									
do 12....	Epoft	12	do	150									
do 13....	Replevin	5	do	100									
do 27....	Replevin	5	do	130									
July 2....	Homely	227	Arichat	976									
do 9....	North Star	16	Carasquet	80									
do 11....	Star of the Sea	59	do	286									
do 23....	Geo. Peabody	63	Cheticamp	775									
do 31....	Epoft	12	Carasquet	80									
Aug. 4....	Geo. Peabody	63	Cheticamp	800									
do 9....	G. D. T.	118	Magpie, N. Shore.....	974									
do 9....	Hare	23	Carasquet	100									
do 21....	Geo. Peabody	63	Cheticamp	802									
do 21....	Dit-on	78	Arichat	542									
Sept. 3....	Hematope	78	Percé	35									
do 3....	Diton	6	Carasquet	915									
do 7....	Adelia	91	Perce	900									
do 10....	Robin	150	Arichat	705									
do 17....	Hematope	76	Carasquet	1,719									
do 21....	Replevin	5	do	20									
do 21....	Providence	48	do	9									
do 28....	Adelia	91	Magpie	4,339									
do 28....	Firm	126	Green Island	2,105									
do 28....	Replevin	5	Carasquet	512									
do 29....	Replevin	5	do	148									
Oct. 10....	Fly	9	do	7									

REUURN of all Ships and Vessels that have cleared Outwards, coastways, with Fish only, Season of 1877.

P O R T O F N E W C A R L I S L E .

Date of Report.	Name of Vessels.	Tons.	Men.	To Where.	Cod Oil, in gallons.	Herring, Pickled, in barrels.	Canned Salmon, doz.	Canned Lobsters, doz.	Trout, Pickled, in barrels.
1877.									
June 23.....	Wallace.....	5	2	Dalhousie.....			288		
do 28.....	A. W. C	60	5	Quebec.....			980		
July 3.....	Mary.....	19	2	Pictou.....				1	
do 21.....	Mary..	19	2	do				1	
do 21.....	Ripple.....	22	2	do				2	
do 29.....	Guide	60	5	P. E. Island	120				
Aug. 13.....	Wallaee	5	2	Dalhousie.....				1,284	
Sept. 17.....	Mary.....	19	2	Pictou.....	200				
do 17.....	Ripple.....	22	2	do	200				
Oct. 4.....	Louise..	16	3	Dalhousie.....		620			
do 20	Comalo..	95	5	Quebec.....	600	520	908	2,264	4
	Total 11 Vessels.	342	32		600	520	908	2,264	4

RETURN of all Ships and Vessels that have entered Inwards, with Fish only, Season of 1877.

P O R T O F N E W C A R L I S L E .

Date of Report.	Name of Vessel.	Tons.	Men.	From Where.	Codfish, Dry, in quintals.	Codfish, Dry, in Barrels.
1877.						
July 31.....	Adelina.....	91	6	Labrador.....	518	
Sep. 5.....	Ranger	59	4	do	1,172	
Oct. 31.....	G. D. T.....	119	7	do	926	14
	Total 3 Vessels....	269	17		2,616	14

RETURN showing the Value of Ships and Vessels employed in the Fish Trade, in the County of Bonaventure, from Paspebiac Point to Maguasha Point, season of 1877.

Name of Firms in which Ships and Vessels are employed.	Names of Places.	Name of Vessel.	Tons.	Value in Dollars.	Remarks.
Clarence Hamilton.....	New Carlisle.....	Isabella.....	45	2,000 00	
Chas. Robin & Co.....	Paspebiac	Century.....	181	9,000 00	
do	do	Ranger	137	6,000 00	
do	do	Seaflower	352	18,000 00	
do	do	Dit-on.....	78	4,000 00	
do	do	Robin	150	7,000 00	
do	do	O. Blanchard.....	260	13,000 00	
do	do	"85"	139	6,000 00	
do	do	Reaper.....	137	6,000 00	
do	do	Homely.....	229	11,000 00	
do	do	C. R. C.....	248	12,000 00	
do	do	Union.....	193	10,000 00	
do	do	Hematope.....	76	3,500 00	
do	do	Peace	35	800 00	
do	do	Beaver.....	15	620 00	
do	do	Epopet	12	400 00	
do	do	Paspebiac	57	3,000 00	
do	do	Replevin	15	200 00	
do	do	Providience.....	48	1,500 00	
do	do	Swallow.....	34	1,500 00	
do	do	Hare.....	23	1,000 00	
do	do	Geo. Pebody.....	63	2,500 00	
do	do	Tickler	96	6,000 00	
do	do	Ant	53	3,000 00	
do	do	Fly	9	200 00	
do	do	Nova Scotia.....	49	1,200 00	
do	do	Etoile du Matin.....	71	2,130 00	
do	do	A. W. C.....	55	1,600 00	
do	do	Patrew	184	8,000 00	
LeBoutillier Brothers.....	do	Marie Georgiana.....	98	3,920 00	
do	do	Hebe	236	9,440 00	
do	do	Industry.....	143	6,006 00	
do	do	Firm	126	5,040 00	
do	do	Gleaner	59	2,360 00	
do	do	Bismark	19	700 00	
do	do	G. D. T.....	65	2,600 00	
do	do	Adelina	91	3,640 00	
do	do	Regala.....	59	2,360 00	
do	do	St. Breara.....	99	3,960 00	
Total.....	39 Vessels.				

There will be
two more ves-
sels in the em-
ploy of LeBout-
illier Bros., next
season which
have been pur-
chased lately
—Lady Young,
106 tons, \$2,000
Charleston, 300
tons, \$9,500.

BAIT.

In order to be enabled to successfully carry on codfishing on our shores as well as everywhere else, one must necessarily be supplied with that indispensable article called bait. Professor Hind, whose statements are seldom challenged, alleges that bait enters for a seventh in the production of cod or halibut. When Americans carried on fishing on our shores bait was an exceedingly valuable article; but who will deny that the disappearance of cod and halibut from several places on our littoral is not due to an indiscriminate destruction of this article of absolute necessity? In Newfoundland, for instance, since United States schooners resumed bank fishing, the trade in capelin and herring has taken such proportions, that experienced fishermen hold strong apprehensions that a decrease in small fish may speedily follow; and I am, moreover, informed that people would hail with pleasure the enactment of prohibitory measures to prevent such injurious results.

Cod is known to be an exceedingly voracious fish, which preys upon the young of its own species as well as upon crustaceans and other little animals frequenting the sea-board. The bait most commonly used in the Gaspé Division is herring, capelin, mackerel, launce, squid, smelt, trout and clams. A sort of mussel known as *bourgaud* is also employed in certain localities for the same purpose. It is caught in the same manner as lobsters.

The following statement shows what an enormous quantity of bait is used on the shores of the Gulf:—

Capelin and Launce.....	148,316 barrels.
Herring	9,127 "
Smelts.....	309 "
Clams	2,533 "
Squid.....	4,700 "

I have every reason to believe that these figures are under-rated, it being impossible to procure correct returns this season from schooners fishing on the north coast.

Along the eastern portion of the north coast codfishing is mostly carried on with capelin and launce, whilst above that point, as high up as Seven Islands, clams are generally used; fishermen in these localities being unprovided with capelin as well as with launce seines. On the coast of Gaspé, from Bonaventure to Mont Louis, herring, capelin, squid, smelts, trout and mackerel are used for bait; from Mont Louis above, clams taken from the north shore are mostly employed. Large quantities of this bait used formerly to be lost in the transfer, but they can now be kept fresh for two months by being placed in bags immersed at low tide.

SALMON FISHING.

Salmon fishing is the pursuit which, after codfishing, undoubtedly creates the greatest enthusiasm amongst the population of the coast of Gaspé. Rich as well as poor, who are unprovided with a salmon fishing station, look with jealous eyes upon those who are so fortunate as to have one. Each day's catch appears to them to be a source of untold wealth, and they will move heaven and earth to secure the privilege of setting a stand alongside their neighbours. When one considers the splendid results obtained since the passing of our fishery regulations; the enormous increase of fish which immediately followed the appointment of active and intelligent Overseers, and the profits derived from the sale of salmon at remunerative prices, owing to the facilities with which the fish can be sent fresh to the United States and Canadian markets; it is not to be wondered at that those who occupy salmon stands on the coasts of this division should realize considerable profits. They expect to do better still when our hatching houses are in full operation, and it will thus be easily understood how those who have no stands should do everything they can to try and secure them.

It must have required hours and nights of labour and meditation to secure results which astonish fishermen themselves; but now that the intelligence displayed in these arrangements, and the advantages derived therefrom are apparent to all, every one is satisfied. The usefulness of protection is fully understood, and slight violations of the law are seldom reported in such a large and important division.

Although the yield of salmon was not much larger than that of last season, parties who visited the rivers of this division state that they seldom noticed them so well stocked with breeding fish. It will easily be understood how the success of salmon fishing as well as that of other fishing pursuits does not altogether depend on the larger or smaller number of fish frequenting the coast or entering the rivers, but also upon certain physical causes which make fishing an easy or a difficult operation. For instance, should the fish enter a stream by thousands and nets cannot be maintained in position owing to the ice, freshets, drift timber or other causes, it will at once be apparent that the catch must be influenced thereby. This explains why it was not larger this season. In sheltered localities, salmon fishing was very good, and indeed better than that of last year, but in exposed places where storms are felt, such as on the coast of Gaspé, from Capo Chatte to Cape Rosiers, and from New Richmond to Maguasha, a slight decrease is noticeable.

Salmon again appeared this spring to wait for the breaking of the ice before entering our rivers, and during the latter part of May they were caught at Gaspé, Maria and Restigouche. Owing to reasons stated in a previous paragraph, salmon fishing at Magdalen and Ste. Anne des Monts yielded but 52 barrels against 75 in 1876. At the latter place, where 14 barrels were caught in 1876, none were taken this season; it being found impossible to set the nets. The reports of the local Fishery Guardians, however, state that the rivers are full of breeding fish. About fifty salmon and five barrels of trout were caught with the fly in Magdalen River. The angling record at Ste. Anne des Monts River gives 76 fish, against 116 in 1876. The local Fishery Overseer states that the reason of this decrease is due to the fact that most of the anglers were inexperienced, and the waters kept so low that, for a long time it was almost impossible to fish.

Ste. Anne des Monts River is one of those where the results of protection are better illustrated:—

In 1871 it yielded	8	salmon of an average weight of 17 lbs.
1872	12	18½ "
1873	87	17½ "
1874	140	19½ "
1875	69	21 "
1876	116	19½ "
1877	76	19½ "

This stream was always considered a favorite resort for poachers. Numerous prosecutions as well as exemplary punishment inflicted in previous years had, to a certain extent, been sufficient to curb their temper. The local Fishery Overseer, however, informs me that, during the past summer, he brought to light several new violations of the law, which will have to be attended to next season.

Trout is so abundant in Ste. Anne River that some fishermen sold \$50 worth of them and others made ample provisions of fish for their winter supply. The average weight of these fish is about five pounds, and the local Overseer values at twenty barrels the quantity used for bait, and at twenty-two barrels the number caught in licensed stations.

Salmon fishing began at Gaspé Basin about a fortnight earlier than last season, and yielded 223 barrels of fish, against 203 in 1876. These figures comprise only the catch within the estuaries of rivers and in Gaspé Bay. It must also be remembered that there were four stations less this season than last year. The nets set in the estuaries did better than the outside ones.

At Malbaie and Barachois a slight decrease is noticed; but there is an increase at Grand River and Pabos; so that on the whole the catch for the Gaspé Division reads as follows: 418 barrels in 1877, against 391 in 1876.

Only three violations of the law occurred during the season, as may be ascertained on referring to my statement of fines and forfeitures.

Gaspé was again this season honored with the visit of Their Excellencies, Lord and Lady Dufferin. Their stay was but of short duration, and His Excellency's catch amounted to about 55 fish, of a total weight of 628 pounds.

Dartmouth River yielded 64 fish, against 57; and Grand River 92 fish, against 155, in 1876. It must, however, be borne in mind that there were not so many anglers on these streams, and that the water kept too low for good sport. Grand Pabos River is steadily improving, owing to the activity of private guardians, and the interest taken in its welfare by the local Fishery Overseer. Only ten salmon were caught in it this season; but the lessees would have done much better had they stayed longer. They, however, appeared to be satisfied with their sport.

In addition to poachers, this river, as well as other streams in Gaspé, was, for a long time, infested with birds called sheldrakes and kingfishers. They are very voracious, and feed upon young salmon and trout, together with their numerous broods. In my humble opinion, these pests are as injurious to salmon as the sweeping of a seine over breeding pools, and I consider it of the utmost importance that they be destroyed as fast as possible. Angling lessees could certainly do no better than follow the example set by Dr. Clerke, of Grand River, who employs his men during their leisure time in firing at them, and he has thus succeeded in destroying these inveterate enemies of salmon. A few dollars judiciously spent in purchasing powder and shot would certainly not be money thrown away.

In the divisions of Port Daniel and Cascapedia the catch was better than that of 1876. Nets could not be set early enough last year at Port Daniel, owing to the ice, and only 55 barrels of fish were caught, whilst 146 barrels are reckoned this season. The fish sold fresh at four cents and a half a pound, which pays better than barrelling it. Salmon fishing in the division of Cascapedia was highly successful, as usual; the catch being 31 barrels above that of last year, showing a total yield of 458 barrels. Most of the fish were sold fresh at five cents a pound. Fly-fishing in Grand Cascapedia River could not be surpassed during the latter end of June and the first part of July; after these dates the water became too clear for successful angling. Had it not been for this drawback, the catch would have been unusually good. The total number of salmon caught amounted to 331 fish, divided among twenty rods. Bonaventure River was angled for only two days, the catch being 21 fish. Three fish were caught in Little Cascapedia River during one day's fishing. The rivers yielded last year as follows: Grand Cascapedia, 369 fish; Bonaventure, 43; and Little Cascapedia, 6. The Overseer reports them well stocked with breeding salmon.

The satisfactory results experienced in the rivers of the Cascapedia Division and the increase yearly noticed therein are, to a great extent, due to the intelligence and activity displayed by the Local Overseer, who pays great attention to the performance of his duties and enforces strict compliance with the fishery laws and regulations. Fishermen have every reason to feel thankful to your Department for such beneficial enactments, as well as to an Overseer who understands his duties so well and fulfils them in such a satisfactory manner. The rich harvest they are now reaping is due to this prudent forethought.

The Division of Restigouche, as well as that of Cascapedia, shows a remarkable increase. The average weight of fish is also reported to be seven pounds higher than that of last season. This goes far to show the great improvement brought by steady and energetic work on the part of the Local Fishery Officers. I must, indeed, pay this compliment to Messrs. Dimock and Mowat, that the efficient guardianship of their respective divisions has become a sort of passion for them. They perform their work with pleasure, without any regard to the hardships and troubles necessarily experienced in extensive fishery districts where interests are so varied and

the necessities of close supervision so urgent. They may indeed feel proud with the result of their labours, and contemplate with satisfaction the benefits bestowed upon fishermen and anglers. It may not be out of place to remark here that, salmon fishermen in the Restigouche Division are specially benefitted by the building of the Intercolonial Railway. Their stations have increased one hundred per cent in value, and will become still more advantageous, owing to the convenience of their being able to sell their fish fresh without any other trouble than that of taking it out of the nets. Salmon caught in the River Restigouche and in the neighbourhood is either sold on the spot or packed in snow for American or Canadian markets. At Campbellton and Charlot, on the New Brunswick side, there are two establishments for freezing salmon by a simple and inexpensive process. The fish will thus keep for months. I saw some of them which had been frozen in twelve hours and were as hard as a stone.

The total yield of salmon net-fishing in the Restigouche Division amounted to 185 barrels this season, being 41 barrels more than last year. This is, however, much below the catch of 1873, which gave 274 barrels. The great increase in the number of salmon stands on the New Brunswick side must undoubtedly influence the catch of the Restigouche Division; but it is hoped that the hatching-house will, in some measure, compensate for the loss of breeding-fish caught by nets.

Salmon angling in the Restigouche and Matapedia Rivers amounted to 746 fish, against 518 in 1876.

The total catch of salmon for Gaspé and Bonaventure amounts to 1,261 barrels against 1,222 in 1876, without reckoning the fish caught by anglers.

FISH-BREEDING ESTABLISHMENTS.

The time has now arrived when we ought to be able to test the practical results of our endeavours to increase the stock of salmon by means of breeding establishments. Should any reliance be placed on the success obtained in other countries, we should next season record some improvement in the yield of fishing stations adjoining the hatching houses. The Gulf Division possesses but two establishments of this kind, one at Gaspé Basin and the other at Restigouche. Although no opportunity has yet offered to visit the latter place, I am satisfied that it is in a prosperous condition, and that the placing of thousands of fry in the rivers emptying into the Bay des Chaleurs has been conducted with great success by the officer in charge. I am, however, better posted with regard to the Gaspé Hatching House, having had several occasions to inspect it during the present and past seasons. Like all similar enterprises it met with its share of difficulties in its inception. As already remarked in previous reports, the officer in charge being a novice in the business, had everything to learn; his zeal and intelligence, however, soon enabled him to overcome all difficulties and the Gaspé establishment is no longer inferior to any other in this country. In 1876, Mr. Vibert succeeded, after much labour and hardships, in laying down 920,000 ova on the breeding troughs, more than ninety-five per cent of which came to maturity and produced young fish, which were subsequently distributed, when about one month old, in the Rivers of Gaspé, Barachois and Pabos. In the timely and judicious distribution of fry lies the whole success of these establishments; too much care cannot, therefore, be taken in handling them, especially when they have to be transported at an early age. The present system might, I think, be improved upon by waiting until they are older and consequently more able to hold their own against the numerous enemies they have to encounter when first deposited in the rivers. Rearing ponds, located in close proximity to the hatching houses, might answer this purpose. The latest information received from Mr. Vibert states that he succeeded in gathering 950,000 ova, and my knowledge of the care and attention which he bestows on his business leads me to expect good results for next season.

The officers in charge of hatching houses being in the practice of sending their annual returns to your Department, I presume it is unnecessary for me to enter into further details on this point; they being fully qualified to treat the question in a

satisfactory manner. Before dismissing this subject, I beg, however, to be excused if I again refer to a suggestion which I made in previous reports regarding the building of a similar establishment at Ste. Anne des Monts River, which offers great inducements for an undertaking of this kind. This part of the coast is not so favoured as Gaspé and Bonaventure, and would greatly benefit from the building of such an establishment.

RESTIGOUCHE MISSION INDIANS.

I again visited these Indians in the spring, and found them as usual, poor, dissatisfied, and complaining of everybody and of everything. Most of them were kept employed during summer by anglers, at remunerative prices. They made plenty of money, which was mostly spent in drink, and they finally indulged in such excesses that the local Fishery Overseer was compelled to warn fly fishermen not to hire them any more. Some of them even attempted spearing salmon; they were caught, and will be punished next season. Had they felt inclined to do so, they might have laid something by, and could thus have procured winter supplies for their families; but they were just as poor as usual when autumn arrived. I cannot refrain from remarking here that it is indeed time the Government took the matter in hand, and try and improve the moral and physical position of these Indians through other means than those employed up to the present time. The country should certainly not be deprived from utilizing the splendid lands set apart for them, and which through laziness and carelessness remain unproductive and uncultivated.

Former experience has already demonstrated the advantages which would accrue to Indians generally were they taught not to rely upon Government grants for their support, surrounded as they are by settlements of white people, whose vices they are sure to adopt, taking, however, great care not to follow their good examples. The Restigouche Micmacs are not a bit better than other Indians in this respect. A change in their mode of living has now become an absolute necessity, and it is high time they should evince some taste for the cultivation of their fine lands, when such material changes and improvements take place everywhere around their reserve. It is certainly an anomalous state of things to see this careless and lazy population, wedged as it is in the midst of another, which grows and prospers rapidly, and to notice these splendid but uncultivated farms where a hundred families could live at ease, and make a fortune which would benefit the whole country.

Were I called upon to suggest a plan, I would humbly recommend the following, which, in my opinion, conciliates as much as possible all the interests concerned. Two-thirds of these Indians are anxious to dispose of their reserve; the Government might buy them out and sell the land again in lots of one hundred acres each to parties desiring to engage in farming. Those Indians who would desire to retain their farms might follow the example of their neighbours and soon become experienced cultivators. The remainder could return to the wilds of the forest, where they would undoubtedly recover their former strength and morality, or else be allowed to disperse among white people, where they would become civilized; a state of things which most of them heartily desire.

The salmon fishing station set apart for the Restigouche Indians was fished this season by Mr. Adams, and yielded 3,527 pounds of fish.

WHALE FISHERY.

Whaling was not more successful this season than last year, although the crews displayed their usual courage and energy in combating the fury of the winds and the dangers of the sea in search of the cetaceous animals whose spoils formerly enriched Gaspé. They did not, unfortunately, happen to be in time on the grounds frequented by whales. Presuming that they would be more successful, they went to the Straits of Belle Isle and to the Lower Labrador, where whales were scarce, although as many as thirty were seen together at times during the fall in the neighborhoods of Mingan and west of Anticosti. For some seasons past it almost looked as if whales intended purposely to mislead fishermen who go in search of them in the Lower

St. Lawrence, when they are quite close to their own harbours. Having lost several weeks in fruitless searches on the coast of Labrador, the whalers returned to Mingan, where they succeeded in making enough to cover their cost of outfit. The crews of three schooners which went whale hunting killed four whales, but did not, unfortunately, secure them all. The quantity of oil amounted to 8,614 gallons, which sold for forty-five cents. The proceeds of this fishery are divided as follows between three schooners :—

"Admiration," Capt. Tripp, 160 barrels, "Lord Douglas," Capt. Baker, 70 barrels, "Violet," Capt. Suldard, 47 barrels. Total, 277 barrels, against 290 in 1876.

During the latter period of the cruise, several whales were killed of an immense size. One of them subsequently grounded on the Island of Anticosti ; another at Mingan, and a third at Magpie. Two of these whales measured ninety-eight feet in length. An accident occurred to the crew of the "Admiration," which proved nearly fatal. Their boat having carelessly approached too near a whale presumed to be dead, was upset, and the men would undoubtedly have been lost had it not been for timely assistance rendered them by another boat's crew which happened to be close by.

The bad success experienced during both seasons past is not an encouragement to our enterprising whalers, and I am unable yet to say what effect it will have upon next year's operations. I was told this fall that the owners of whaling vessels intended giving up their expeditions. I cannot say how far this may be true, but I hope that better counsels will prevail, and that another trial will be given to this venture, where a single strike of luck is all that is required to recover from a succession of failures, and that next season's operations will be more remunerative.

HERRING FISHERY.

Of all the fish frequenting our shores, herring is the first to arrive in the spring. During the latter part of April, or early in May, according to the disappearance of ice from bays where natural instinct impels them to enter for reproduction, the water is alive with these fish to such an extent even that it sometimes becomes discolored. The most frequented spots on the Gulf shores at this period of the year are the Magdalen Islands, Gaspé Bay, Bay des Chaleurs, Anticosti, Seven Islands, The Cawees, Washeecootai and Natashquan. Several of these places, such as Magdalen Islands, Fox Bay, Anticosti and Washeecootai, are resorted to every spring by large fleets of foreign vessels, as will be shortly explained.

A brisk trade in spring herring used to be formerly carried on between Bay des Chaleurs and Norway ; the owners of vessels appear, however, to have now gone to other localities, and this branch of commerce has become almost paralyzed, owing to a want of buyers and a market.

As already stated in previous reports, herring first strikes in large schools, but so soon as the work of re-production is completed, they scatter everywhere on the coast in search of food. At this period of the year they are caught with nets and used for baiting cod. Later in the season, during the month of August, herring are met with on the Banks of Caraquette, and on that part of the north coast extending from the Lower Labrador to Caribou Islets. This run of herring, which closely resembles those caught during the summer on the South Shore is much larger and fetches higher prices in our markets. These fish, however, do not pickle so easily, neither are those caught at both these dates exported to the same markets. The fish caught on the South Shore, with the exception of what is used for local consumption, is exported to United States markets and the West Indies ; several cargoes having even during the past four or five years been sent to Norway, where they fetched remunerative prices. The fall catch is mostly all sent to Canadian markets and used at home.

Herring fishing is carried on in two ways ; with seines or nets, and in brush fisheries.

Spring fishing completely failed in Bay des Chaleurs this season, owing to floating ice which prevented the setting of nets at the proper time. The catch

amounted to only 2,756 barrels, against 6,391 in 1876. The decrease in herring used for bait is equally large; the quantity taken this season amounting to only 6,955 barrels, against 12,503 barrels last season.

LOBSTER FISHERY.

The impoverishment of lobster fishing grounds on the shores of Massachusetts and Maine, as well as upon certain portions of the Maritime Provinces, and the large profits derived from such an industry naturally impelled interested parties to seek other localities where they might continue their work, the value of which they knew so well how to appreciate. They thought of our shores which had yet been untried; experiments being made in small bays and coves of Bay des Chaleurs. The first establishments began in 1874, and meet with such success that there is now great competition among packers who desire to secure the most advantageous localities in Bay des Chaleurs and Gaspé. A fact worthy of notice is that, where canneries were first in operation, the result of their work is already apparent. At Carleton, for instance, packing had to be abandoned for want of lobsters. Whilst 216,432 pounds of lobsters were canned at Carleton and Maria in 1874, none were preserved in the former place this year, and the canneries of Maria, Bonaventure and Capelin put up only 35,200 cans.

If, according to Professor Buckland, the disappearance of lobsters on the United States coast is due to inconsiderate fishing, and the improvement observed in the same fishery in England is owing to judicious modes of protection, it is evident that both examples should be a warning and satisfy every one of the necessity of extending to this industry the same amount of protection which is given to others. It becomes the duty of the Government to strictly enforce the judicious regulations adopted for the protection of this precious mine of wealth, and not to comply too readily with remonstrances or inconsiderate demands on the part of individuals who have no other interest at stake but to make a fortune in as little time as possible without any regard to the lasting injuries they may cause to those who will come after them, and to the ultimate destruction of an industry which, properly guarded, might have been made the nucleus of an important local trade.

I do not certainly desire to be understood as trying to insinuate anything which might possibly injure those who are now engaged in the lobster business, especially when their presence amongst our population is a source of abundance and a blessing. Their liberal mode of dealing cannot be too highly praised, and, indeed, I might be inclined to think that after all they are not so much to blame for trying to get everything they can out of the precious mine they have in hand, were they allowed to do so. But I am aware that several owners of canning establishments in Bay des Chaleurs and Magdalen Islands are personally favourable to measures of protection, and to a proper close-season. All they want is that this close-season be so fixed as to afford reasonable protection to lobsters, whilst at the same time securing packers against loss, without adequate advantages. Human nature being the same everywhere, it is quite evident that lobster packers would never stop unless compelled to do so by law. It thus becomes the duty of the Government to adopt proper measures for the protection of this source of industry, and to determine the period when such fishing should be carried on. But how to do this so as to conciliate all interests concerned, and at the same time protect the fishing, is the difficulty. The time when lobsters spawn varies according to localities, even in adjoining places, and it differs each year. It is also known that the weather and the temperature of the water more or less influence the period when they approach the shores to spawn. Their age has also something to do with the motions attending reproduction, and I may say that, in accordance with observations made during the past season as well as with those of others, lobsters spawn all the year round under the

influence of local causes ; that is to say, that lobsters spawn in May, others in July, and some even as late as November. In order to enable myself the better to form an opinion of this point, I visited Port Daniel and Gaspé Bay in 1876, and became satisfied that the spawning was over by September. When at Lobster Cove, in Gaspé Bay, this season, on the 11th October, I noticed thousands of lobsters in two or three feet of water, and I am sure that two-thirds of them had eggs attached. On the 1st of the same month, when at Pleasant Bay, Magdalen Islands, Mr. Webb, of the firm of Stayner & Co., gaffed about 100 lobsters, seventy-five of which had eggs. Without desiring to be understood as placing too much importance on these observations, I think that incomplete as they are, they, however, go far to prove the uncertainty of the period at which lobsters cast their eggs, and that in such a case, the close-time now in force can have but limited influence upon the protection of the species. In one of my progress reports I had the honour to call your attention to the fact that, in September last, at Port Daniel, when visiting trap-nets set in four or five fathoms of water, very few lobsters with eggs attached were found in them. I saw the lobsters with my own eyes and noticed several boat loads taken out of the traps without any eggs, whilst others caught near shore had thousands of them. Mr. Webb made similar observations at Magdalen Islands, and he feels inclined, like myself, to think that, when impelled towards the shore by natural instinct, nothing will stop or delay lobsters from their purpose.

The above observations made at various places, by different persons, in distinct years, and even at various months might, I dare say, enable your Department to choose some practical dates which would sufficiently protect the species, whilst being more acceptable to packers and fishermen. Prohibitions of some kind are undoubtedly necessary, because even supposing that no female lobsters were caught, an indiscriminate destruction of males or even females without eggs would certainly be injurious, but when is the proper time to be fixed : that is the difficulty ? However, were I permitted to offer a suggestion, I might submit that in the Province of Quebec, from the 20th September to the 15th June seems to be the most favourable period ; and I feel satisfied that these dates would please everybody. Before the middle of June and after the 20th of September, the weather keeps rough or stormy, and fishermen can only with great difficulty attend to their traps. The dates which I submit would suit both interests ; packers and fishermen could thus take advantage of the three most favourable months in the season whilst it would afford ample time to lobsters to complete the work of reproduction without fear of being disturbed.

LOBSTER-PACKING.

Lobster-packing establishments increase rapidly on our shores. In 1874 there was but one of these at Carleton, in 1875 two were built at Maria and Black Cape, and one at Bonaventure ; whilst this season two additional ones have been started at Port Daniel and Little River. It is intended to open two others at Newport next year.

The total number of pounds of lobsters canned this season amounted to 173,565 against 96,175 in 1876, as follows :—

	Pounds.
Maria, Bonaventure and Capelin	35,000
Port Daniel.....	65,000
Little River.....	30,000

Mr. Holliday has a canning establishment at Barachois, Malbay, since 1873. Although he fished the place with care and moderation, his catch slightly decreased during the past three years:—

	Pounds.
In 1875 he canned.....	60,000
1876 " 	50,000
1877 " 	43,000

RETURN showing the number of Canning Establishments within the Cascapedia and Maria Divisions, and the quantity of Lobsters and Salmon canned, during the season of 1877.

Names of Places where Canning Establishments are established.	Names of Proprietors of Establishments.	When commenced canning.	When finished canning.	Number of Traps used.	Number Pounds of Lobster canned.	Number Pounds of Salmon canned.
Maria	Hoegg & Walker.....	June 4...	Oct. 15...	350	16,000	48,084
Capelin	C. Armstrong	do 7...	do 15...	900	15,360	720
Bonaventure	George Haddow.	May 30...	July 12...	150	3,840	.....
					35,200	48,804

SEINING OF SMELTS.

Up to the present time I omitted speaking of the practice of seining smelts in the estuaries of rivers for the purpose of procuring bait for codfishing. I now deem it my duty, however, to say that this practice, when carried on during the months of September and October, cannot be but very injurious to young salmon which are then found near the mouths of rivers and are caught in large numbers when seining for smelts is carried on. Fishermen assert that they saw half a bushel of young salmon caught at a haul of these seines, and the matter had to be brought under the notice of the local Fishery Overseer for the Cascapedia Division. From conversations subsequently had with the practical and intelligent fishermen at Grand and Magdalen Rivers, I felt convinced that a large number of young salmon were also destroyed there by seines. It is time that a stop be put to this injurious practice; but, it being of the utmost importance that as little hinderance as possible be placed on codfishing, and as these fish are always most abundant near salmon streams, I would suggest that seining for smelts be allowed, but not nearer than one-quarter of a mile on each side of the mouth of any salmon river.

MAGDALEN RIVER DIVISION.

With the exception of the above Division, all the others on the coast of Gaspé are amply provided with efficient Guardians; and the Fisheries Protection Service is consequently unsurpassed. The same state of things does not exist in the Magdalen River Division, although it is in no way inferior to others. It extends from Cape Gaspé to Claude River, a distance of about one hundred and twenty miles. There are within these limits no less than ten salmon stations, six or seven salmon streams and extensive codfishing establishments. A very efficient Guardian now attends to this division; but as he receives only fifty dollars pay, it will easily be understood how he cannot devote his undivided attention to the work of guardianship. Indeed, this paltry sum is hardly sufficient to reimburse him for the loss of his time when collecting fishery statistics. It is of the utmost importance that this Guardian be placed on the same footing as others, so that he be enabled to perform his duties in a satisfactory manner to himself and the Department.

RETURN OF FISHING VESSELS, kinds of Vessels, number of Men

COUNTY OF

NAME OF PLACE.	Vessels.			Fishing Boats.		Flat Boats.		No. of Fishermen.		No. of Shoremen.		Salmon Nets.		Cod Seines.		Herrin Seines		
	No.	Tons.	Value.	No. of Sailors.	No.	Value.	No.	Value.	No.	Value.	No.	Yards.	No.	Value.	No.	Yards.	No.	Value.
Cape Chatte.....	3	156	7700	14	80	4000	85	1275	161	51								
Ste. Anne des Monts.....	2	62	2500	7	159	7950	160	2400	276	80								
Rivières à Marthe and Marsouis				6	300	8	120	14	5									
Rivière Claude				14	850	10	90	20	8	1	140	60						
Rivière à Pierre.....				11	550	8	80	18	7									
Mont Louis				38	1950	38	400	76	30	2	260	110						
Ruisseau des Olives.....				5	250	3	30	10	3									
Anse Pleureuse				4	200	2	20	8	4	1	120	50						
Gros Mâle				11	500	8	80	20	8	1	120	50						
Manche d'Epée				9	450	9	90	15	4									
Petite Rivière Made- leine				5	250	2	20	7	3									
Rivière Madeleine.....	1	45	500	4	5	250	4	40	8	4	2	270	110					
Cape à L'Ours				11	550	7	70	22	10									
Grande Anse				1	15			2										
Grande Vallée				26	1300	12	120	54	25	1	110	45						
Anse à Collin				3	150	3	30	6	2									
Petite Vallée				9	450	6	60	16	6									
Pointe à la Frégate				7	350	7	70	12	5									
Petite Anse				5	250	5	50	10	3									
Grand Cloridorme				8	400	8	80	16	8									
Petit Cloridorme				7	350	7	70	14	6	1	150	60						
Pointe Sèche				15	750	15	150	30	15									
Grand Etang				14	850	5	50	28	14									
Anse à Valeau				10	500	10	100	20	9									
Pointe Jaune				9	450	9	90	18	7									
Echourie				5	250	5	50	8	3									
Grande Anse				4	200	4	40	7	3									
Petit Cap				13	650	13	130	26	12									
Petite Rivière au Re- nard				10	500	10	100	20	8									
Rivière au Renard				55	2750	55	550	110	50									
Anse à Fougère				2	100	2	20	4	1									
Anse à Gris Fond				46	2300	46	460	92	46	1	138	75						
Trois Ruisseaux.....				3	650	3	30	6	2									
Jersey Cove				8	400	8	80	16	7									
Anse à la Louise				18	900	18	180	36	18									
Cap des Rosiers.....				34	1750	34	340	68	34									
Ship Head				8	294	10	60	18										
Indian Cove				14	774	7	52	29	8									
Little Gaspé, Grande Grève and St. George's Cove.....	2	146	1600	9	47	3386	53	463	107	38	4	588	280					
Cap aux Os and Seal Rock					9	188	18	102	26		3	527	220					
Peninsula	1	58	1100	16	7	115	15	157	21		10	2566	788					
North-West Bay and River	1	44	1000	4	3	180	8	80	14		10	2152	560					
South-West Bay and River	2	112	2400	19	7	330	30	300	16		18	3642	1080					

kinds of Nets used, kinds of Fish and Fish Oils, &c., &c.

GASpé DIVISION.

NETS AND SEINES.

RETURN OF FISHING STATIONS, kinds of Vessels, number of Men

COUNTY OF GASPE

NAME OF PLACE.	Vessels.			Fishing Boats.		Flat Boats.		No. of Fishermen.		Salmon Nets.		Cod Seines.		Herring Seines.			
	No.	Tons.	\$	No.	\$	No.	\$	No.	\$	No.	Yards.	\$	No.	Yards.	\$	No.	Yards.
Gaspé Basin	4	250	11400	20	2	78	12	104	8	70	8	1792	470	...	...	...	...
Sandy Beach and Lobster Cove	6	261	7500	38	21	760	20	113	42	10	19	4720	1330	...	...	...	...
Douglastown.....	1	63	2000	4	19	1015	19	209	38	...	8	1822	640	...	...	...	...
Seal Cove and Anse à Brilliant.....	1	33	700	3	9	415	5	50	18	...	3	820	240	...	...	...	...
Chien Blanc .....	...	...	...	...	28	1556	30	248	49	2	...	...	...	...	...	...	...
Point St. Peter.....	9	994	47000	66	84	4920	31	314	157	110	1	180	80	...	...	...	...
Malbaie	1	48	800	5	45	2660	27	270	90	80	2	680	200	...	...	...	...
Belle Anse Cove.....	...	...	...	...	12	720	10	100	24	10	2	960	400	...	...	...	...
Barachois River.....	1	24	500	3	58	3480	40	400	116	50	3	1200	600	...	...	...	...
Corner of Beach	2	103	3200	6	12	720	8	80	24	30	3	800	400	...	...	...	...
Cannes de Roches.....	1	55	1800	3	10	600	9	90	29	7	...	...	...	...	...	...	...
Percé.....	1	14	240	2	155	9764	73	749	311	222	1	150	50	...	...	...	...
Bonaventure Island.....	...	...	...	...	59	2197	33	381	123	81	...	...	...	...	...	...	...
Anse à Beau Fils.....	...	...	...	...	38	3200	24	250	76	54	...	...	...	...	...	...	...
Cape Cove.....	3	234	6200	18	54	4060	25	241	108	76	1	200	200	...	...	...	...
Cap d'Espoir .....	...	...	...	...	13	1310	11	120	26	20	...	...	...	...	...	...	...
Little River .....	...	...	...	...	34	2280	14	150	68	23	...	...	...	...	...	...	...
Grand River.....	...	...	...	...	94	8020	31	299	189	129	3	350	280	...	...	...	...
Little Pabos.....	...	...	...	...	58	4850	28	336	116	53	2	1500	360	...	...	...	...
Grand Pabos .....	...	...	...	...	21	1430	10	114	44	13	3	460	184	...	...	...	...
Newport.....	...	...	...	...	77	7500	30	300	154	87	3	150	48	...	...	...	...
Total.....	42	2702	98140	241	1668	101117	1260	12697	3306	1674	117	26567	8970	...	...	...	...

kinds of Nets used, kinds of Fish and Fish Oils, &c., &c.—Continued.

DIVISION.—*Continued.*

NETS AND SEINES.

RETURN OF FISHING STATIONS, kinds of Vessels, number of Men,

COUNTY OF GASPE

NAME OF PLACE.	Salmon, barrels, cured.	Salmon, fresh in ice, lbs.	Salmon, in cans, lbs.	Salmon, smoked, boxes.	Summer Fishing.		Fall Fishing.		Haddock, quintals.	Ling, quintals.	Halibut, barrels.	Herring, barrels.
					Cod, quintals.	Cod, quintals.	Cod, quintals.	Cod, quintals.				
Cape Chatte.....					2,150	330						16
Ste. Anne des Monts and River.....	1,407				3,870	400						35
Rivières à Marthe and Marsouis.....					300	40						
Rivière Claude.....	10				200	75						
Rivière à Pierre.....					150	50						
Mont Louis.....	9				850	150						
Ruisseau des Olives.....					125	50						5
Anse Pleureuse.....	5				100	25						3
Gros Mâle	5				350	100						5
Manche d'Epée.....					160	75						6
Petite Rivière Madeleine.....					70	25						
Rivière Madeleine.....	15	1,000			150	50						
Cap à l'Ours.....					400	75						3
Grande Anse.....					10	3						
Grande Vallée	1				1,200	100						
Anse à Collin					75	40						5
Petite Vallée					200	100						2
Pointe à la Frégate					260	60						
Petite Anse.....					300	100						
Grand Cloridorme.....					300	100						
Petit Cloridorme.....	4				300	50						
Pointe Sèche.....					550	150						
Grand Etang.....					856	200						
Anse à Valeau.....					400	100						10
Pointe Jaune.....					400	100						11
Echourie.....					200	50						3
Grande Anse.....					225	75						10
Petit Cap					450	150						10
Petite Rivière au Renard.....					350	100						3
Rivière au Renard.....					3,000	600						
Anse à Fougère					25	12						
Anse à Gris Fond.....	3				1,950	500						
Trois Ruisseaux.....					100	40						
Jersey Cove.....					280	50						
Anse à la Louise					750	200						
Cap des Rosiers.....					1,260	600						
Ship Head.....					190	149						9
Indian Cove.....					514	226						8
Little Gaspé, Grand Gréve & St. George's Cove	5	2,772			1,879	718	50	10				17
Cap aux Os and Seal Rock		3,400			189	100						6
Peninsula.....		19,862			90	30						14
North-West Bay and River		11,105					15					10
South-West Bay and River		9,893					30					60
Gaspé Basin		9,569					3					
Sandy Beach and Lobster Cove		19,526			467	250						
Douglastown		7,288			567	347						
Seal Cove and Anse à Brilliant		2,013			460							14
Chien Blanc					1,388	337						
Point St. Peter		1,200			4,805	500						27
Maubie		2,283			2,800	720						6
Belle Anse Cove		4	1,500			720	180					10

kinds of Nets used, kinds of Fish and Fish Oils, &c., &c.—Continued.

DIVISION.—*Continued.*

RETURN OF FISHING STATIONS, kinds of Vessels, number of Men,

COUNTY OF

NAME OF PLACE.	Salmon, barrels, cured.		Salmon, fresh in ice, lbs.		Salmon, in cans, lbs.		Summer Fishing.	Fall Fishing.	Haddock, quintals.	Ling, quintals.	Halibut, barrels.	Herring, barrels.
Barachois River.....	6	4,904	.....	.....	1,800	1,160	.....	.....	.....	.....	.....	20
Corner of Beach	8	.....	.....	720	240	.....	.....	.....	.....	.....	.....	.....
Cannes de Roches .....	.....	.....	.....	600	200	.....	.....	.....	.....	.....	.....	.....
Percé.....	.....	80	.....	9,129	1,812	10 5	76	.....	.....	.....	.....	.....
Bonaventure Island .....	.....	.....	.....	3,851	389	30 9 $\frac{1}{2}$	6	.....	.....	.....	.....	.....
Anse à Beau Fils.....	.....	.....	.....	1,891	1,040	.....	9	.....	.....	.....	.....	9
Cape Cove.....	.....	8	.....	3,387	1,280	.....	56	.....	.....	.....	.....	.....
Cap d'Espoir.....	.....	.....	.....	1,172	320	.....	5	.....	.....	.....	.....	.....
Little River.....	.....	.....	.....	2,570	750	.....	6	.....	.....	.....	.....	.....
Grand River.....	17	1,241	10,000	6,539	1,263	.....	.....	.....	.....	.....	.....	.....
Little Pabos.....	26	.....	.....	4,950	1,975	.....	.....	.....	.....	.....	.....	.....
Grand Pabos	20	160	.....	1,540	520	22 12	70	.....	.....	.....	.....	.....
Newport.....	5	.....	.....	5,315	1,450	74 35	.....	.....	.....	.....	.....	.....
Fly-fishing—York, St. John & Dartmouth Riv's.....	.....	2,686	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	151	101,889	10,000	1	79,849	20,929	186	62	1	556	.....	.....

Fly-fishing:—River Ste. Anne des Monts..... 1,407 lbs. Salmon.
do do Magdalen..... 1,000 do
do do York 1,144 do
do do St. John 688 do
do do Dartmouth 854 do
do do Grand 1,241 do
do do Grand Pabos 160 do

Total. 6,494 lbs.

kinds of Nets used, kinds of Fish and Fish Oils, &c., &c.—Concluded

GASpé DIVISION.—Concluded.

RECAPITULATION.

YIELD and Value of the different Fisheries of Gaspé Division in 1877

Kinds of Fish.	Quantities.	Prices.	Value.
Summer Cod fishing.....	79,849 quintals, at...	\$ cts.	\$ cts.
Autumn do	20,929 do	5 00	399,245 00
Herring	556 barrels,	5 00	2,780 00
Haddock	186 quintals,	5 00	980 00
Ling	62 do	5 00	310 00
Halibut	1 barrel,	6 00	6 00
Mackerel	193 do	10 00	1,930 00
Salmon, pickled.....	151 do	12 00	1,812 00
do fresh in ice.....	101,889 lbs.,	0 05	5,094 45
do preserved in cans.....	10,000 lbs.,	0 15	1,500 00
do smoked.....	1 box,	4 00	4 00
Trout.....	61 barrels,	8 00	488 00
Sardines.....	60 do	5 00	300 00
Lobsters, preserved in cans.....	73,000 lbs.,	0 15	10,950 00
Cod Tongues and Sounds	181 barrels,	9 00	1,629 00
Seal Skins	5 pieces,	1 25	6 25
Porpoises' Skins	1 do	4 00	4 00
Seal Oil.....	60 gallons,	0 50	30 00
Porpoise Oil.....	60 do	0 80	48 00
Whale Oil.....	8,614 do	0 50	4,307 00
Cod Oil.....	81,203 do	0 50	40,601 50
Fish and Clams used as Bait and Manure	34,105 barrels,	1 00	34,105 00
Fish used for local consumption.....	1,396 do	4 00	5,584 00
Total value of the products of the Fisheries in 1877.....			\$616,309 20
do do do 1876.....			514,050 65
	Increase.....		\$102,258 55

Total value of the products of the Fisheries in 1877....
do do do 1876....

\$616,309 20
514,050 65

Increase...

RETURN OF FISHING STATIONS, kind of Vessels, number of Men,

COUNTY OF BONA

NAME OF PLACE.	Vessels.			Fishing Boats.		Flat Boats.		No. of Fishermen.		Salmon Nets.			Cod. Seines.			
	No.	Tons.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	
Anse au Gascon.....				63	1980	15	120	81	.....	1	130	52	.....	.....	.....
Anse à la Barbe.....				20	600	5	35	35	.....	1	120	50	.....	.....	.....
Port Daniel				57	1440	10	60	72	27	8	2890	1156	.....	.....	.....
Pointe Loup-Marin.....						61	493	61	.....	2	346	136	.....	.....	.....
Chigouac				10	500	6	40	20	.....	.....	.....	.....	.....	.....	.....
Nouvelle				40	1600	6	40	80	.....	.....	.....	.....	.....	.....	.....
Paspébiac Point				25	900	10	80	50	.....	1	160	64	.....	.....	.....
Paspébiac	38 4007	179176	224	55	2750	48	480	125	125	.....	.....	.....	.....	.....	.....
New Carlisle.....	1	45	200	4	8	400	70	700	119	8	.....	.....	.....	.....	.....
Grand and Little Bonaventure						57	4560	171	1710	248	57	.....	.....	.....	.....
New Richmond, Capelin and Black Cape						9	324	133	1330	172	7	97	3472	1736	.....
Maria.....						12	600	107	1070	153	10	187	7574	3787	.....
Carleton.....						10	500	159	1590	170	7	134	5136	2518	.....
Nouvelle.....						6	300	13	130	33	6	.....	.....	.....	.....
Maguasha.....								8	80	12	.....	40	1564	782	.....
Fleurant's Point.....								4	70	5	.....	5	2450	735	.....
Englishman's Brook.....									1	20	1	1	300	90
Escuminac Point.....									1	20	1	1	200	60
Pointe à la Garde									1	20	1	1	350	165
Battery Point.....								1	15	1	.....	1	200	600	.....
Little Battery.....								1	15	1	.....	1	150	45	.....
Cross Point									1	15	1	1	300	90
Mission Point.....								1	20	1	.....	1	300	90	.....
Bourdon Point.....								1	20	2	.....	3	1800	540	.....
Nets set by 10 settlers above tide water (Restigouche River)								10	80	10	.....	10	600	200	.....
Total	39 4053	179376	228	372	16454	84	8253	1455	247	496	28042	12296	.....	.....	.....

kind of Nets used, kinds of Fish and Fish Oils, &c., &c.

VENTURE DIVISION.

NETS AND SEINES.

Herring Seines.		Herring Nets.		Mackerel Seines.		Mackerel Nets.		Capelin Seines.		Launce Seines.		Seal Nets.		Brush Fisheries for Eels.		Trout Nets.	
No.	Yards.	No.	Yards.	No.	Yards.	No.	Yards.	No.	Yards.	No.	Yards.	No.	Yards.	No.	Yards.	No.	Yards.
\$	Value.	\$	Value.	\$	Value.	\$	Value.	\$	Value.	\$	Value.	\$	Value.	\$	Value.	\$	Value.
40	1600	320	.....	5	200	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17	612	102	.....	1	40	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
50	1800	350	.....	5	200	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
72	2880	780	.....	7	280	140	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
50	1800	350	.....	4	160	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
60	2100	360	.....	16	640	320	1 40	40	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	1400	250	.....	4	160	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
70	2460	795	.....	45	1440	192	17	680	612	.....	.....	.....	.....	.....	.....	.....	.....
222	7136	2016	.....	6	192	72	8	320	288	.....	.....	.....	.....	.....	.....	.....	.....
459	14916	4302	.....	57	1824	684	25	1000	900	.....	.....	2	12	17	616	119	.....
370	11876	3375	.....	9	288	108	7	280	252	.....	.....	11	436	77	.....	.....	.....
284	9136	2592	.....	10	320	120	1	40	36	.....	.....	8	80	.....	.....	.....	.....
460	14761	4170	.....	.....	.....	.....	3	120	72	.....	.....	1	6	.....	.....	.....	.....
50	1634	468	.....	30	96	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	640	180	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	110	33	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	40	12	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	35	10	.....	.....
.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	120	36	.....	.....
2264	74741	20410	.....	130	4160	1212	103	4120	3000	1 40	40	11	98	41	1357	287	.....

RETURN OF FISHING STATIONS, kinds of Vessels, number

COUNTY OF BONAVVENTURE

NAME OF PLACE.	Salmon, Cured, barrels.		Salmon, Fresh, in ice, lbs.		Salmon, in cans, lbs.		Salmon, Smoked, boxes.		Cod, quintals.		Haddock, quintals.		Ling, quintals.		Halibut, barrels.		Herring, barrels.		Smoked Herring, boxes.		Mackerel, barrels. ¹	
	Summer Fishing.	Fall Fishing.	Summer Fishing.	Fall Fishing.	Summer Fishing.	Fall Fishing.	Summer Fishing.	Fall Fishing.	Summer Fishing.	Fall Fishing.	Summer Fishing.	Fall Fishing.	Summer Fishing.	Fall Fishing.	Summer Fishing.	Fall Fishing.	Summer Fishing.	Fall Fishing.	Summer Fishing.	Fall Fishing.	Summer Fishing.	Fall Fishing.
Anse au Gascon	2	.....	1509	.....	450	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	160	.....	.....	.....	.....	.....
Anse à la Barbe	1	.....	2568	.....	225	210	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70	.....	.....	.....	.....	2
Port Daniel .....	.....	.....	31483	.....	525	550	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	120	.....	.....	.....	.....	.....
Pointe Loup Marin .....	.....	.....	6241	.....	665	180	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150	.....	.....	.....	.....	2
Chigouac .....	.....	.....	.....	.....	150	140	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	180	.....	.....	.....	.....	.....
Nouvelle .....	.....	.....	.....	.....	600	800	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	350	.....	.....	.....	.....	.....
Paspébiac Point	4	.....	.....	.....	120	340	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60	.....	.....	.....	.....	.....
Paspébiac .....	.....	.....	.....	.....	450	1100	20	10	.....	.....	.....	.....	.....	.....	.....	.....	30	.....	.....	.....	.....	4
New Carlisle .....	.....	.....	.....	.....	200	162	3	4	.....	.....	.....	.....	.....	.....	.....	.....	30	.....	.....	.....	.....	3
Grand and Little Bonaventure .....	.....	.....	.....	.....	1140	600	25	18	.....	.....	.....	.....	.....	.....	.....	.....	750	.....	.....	.....	.....	7
New Richmond, Capelin and Black Cape .....	.....	116 $\frac{3}{4}$	.....	720	.....	108	85	4	2	.....	.....	.....	.....	.....	.....	.....	220	300	.....	.....	.....	4
Maria .....	.....	123 $\frac{3}{4}$	.....	48084	.....	130	90	5	3	.....	.....	.....	.....	.....	.....	.....	30	400	.....	.....	.....	3
Carleton	75	.....	.....	.....	.....	28	20	3	.....	.....	.....	.....	.....	.....	.....	.....	20	.....	.....	.....	.....	3
Nouvelle .....	.....	.....	.....	.....	.....	30	18	2	.....	.....	.....	.....	.....	.....	.....	.....	20	.....	.....	.....	.....	.....
Maguasha	39 $\frac{1}{2}$	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Fleurant's Point .....	.....	17181	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Englishman's Brook .....	.....	158	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Escuminac Point .....	.....	276	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pointe à la Garde .....	.....	7600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Battery Point .....	.....	1050	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Battery .....	.....	419	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cross Point .....	.....	17961	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mission Point .....	.....	3527	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bourdon Point .....	.....	7390	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nets set by 10 settlers above tide water (Restigouche River)	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fly-fishing .....	.....	23322	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	402	78884	90605	.....	4821	4895	62	37	.....	.....	2200	700	28	.....	.....	.....	.....	.....	.....	.....	.....	.....

Fly-fishing:-

River Bonaventure	Salmon, lbs.	Trout, lbs.
do Little Cascapedia	331	.....
do Grand do	84	800
do Matapedia	7,085	.....
do Upsilonquitch	4,344	.....
do Restigouche, Lower Division	82	.....
do do Middle do	4,200	.....
do do Upper do	4,387	.....
Total	2,809	.....
	23,322	800

Men, kinds of Nets used, kinds of Fish and Fish Oils, &c.

DIVISION—*Continued.*

				SEALS, WHALES AND PORPOISES.	OILS.	FISH AND CLAMS USED AS BAIT AND MANURE.	
				Cod Tongues and Sounds, barrels.			
				No. of Seals.			
				No. of Seal-skins.			
				No. of Whales.			
				No. of Porpoises.			
					Seal Oil, gallons.		
					Whale Oil, gallons.		
					Porpoise Oil, gallons.		
					Cod Oil, gallons.		
					Herring, barrels.		
					Capeelin, barrels.		
					Sme't, barrels.		
					God Roes, barrels.		
					Clams, barrels.		
					Lobsters, cans, lbs.		
							Fish used for local consumption, barrels.
Trout, barrels.	Sardines, barrels.	Eels, barrels.	Tunny, barrels.				
62	21	...	12		8171 1783 8121	805 5735 334 159565	2751

RECAPITULATION.

YIELD and Value of the different Fisheries of Bonaventure Division in 1877.

Kinds of Fish.	Quantities.	Prices.	Value.
		\$ cts.	\$ cts.
Summer Cod fishing.....	4,821 quintals, at	5 00	24,105 00
Autumn do	4,895 do	5 00	24,475 00
Herring.....	2,200 barrels.....	5 00	11,000 00
do smoked.....	700 boxes.....	0 25	175 00
Makerel.....	28 barrels.....	10 00	280 00
Haddock.....	62 quintals.....	5 00	310 00
Ling.....	37 do	5 00	185 00
Salmon, pickled.....	402 barrels.....	12 00	4,824 00
do fresh in ice.....	78,884 lbs.....	0 05	3,944 20
do preserved in cans.....	90,605 lbs.....	0 15	13,590 75
Trout.....	62 barrels.....	8 00	496 00
Eels.....	21 do	10 00	210 00
Lobsters, preserved in cans.....	100,565 lbs	0 15	15,084 75
Cod Tongues and Sounds.....	12 barrels.....	9 00	108 00
Cod Oil.....	8,171 gallons	0 50	4,085 50
Fish and Clams used as Bait and Manure.	16,838 barrels.....	1 00	16,838 00
Fish used for local consumption.....	2,751 do	4 00	11,004 00
Total value of the products of the Fisheries in 1877.....			130,715 20
do do do 1876.....			140,209 35
Decrease.....			\$9494 15

LABRADOR DIVISION.

Without desiring in the least to cast any doubt on the assertions of English and French writers, who contend that the coast of Labrador was discovered in 1496 by Sebastien Cabot, and that it was first explored by a Portuguese named Cortereal who, having noticed some indications of fertility on the southern portion, named it *Terra de Labrador* (arable land) evidently a misnomer which, by corruption, became Labrador; I must own that I am half inclined to share the opinion of Mr. Samuel Robertson, of Sparr Point, North coast, who, in a series of notes read before the Quebec Literary and Historical Society in 1841 gave the following explanations relative to the naming of that coast:—

“I shall not attempt to confute the claim of Cortereal and others who are “supposed to have given the name of Labrador to that tract of country lying “between the St. Lawrence and Hudson’s Bay, and shall merely give what I think is “the true account, and which is supported by the universal tradition of the coast. “viz: That one, *Labrador*, a Basque whaler, from the Kingdom of Navarre in “Spain, did penetrate through the Strait of Belle Isle as far as Labrador Bay some “time about the middle of the fifteenth century; and eventually the whole coast “took its name from that bay and harbour.”

“The tradition of the coast at all times admitted that the Basques were “the first discoverers, and that they had long frequented the coast before the French, “whom we shall see had fisheries before the year 1500. In all the early voyages, as “of Cabot &c., the Basques are always mentioned as met with, and the Basque vessels “found on the coast of Newfoundland by Cabot, in his first voyage, is clear evidence “of their prior acquaintance with the northern shores of America.”

“As to the Basque whalers, there is good reason to believe that they had explored “the Gulf and part of the River St. Lawrence before the year 1490.”

Having stated that these suggestions are not offered as established points, but more as objects of discussion to the antiquary and historians who may have access to manuscripts and other sources of informations which he had not, Mr. Robertson continues as follows:—

“There was nothing splendid in the coasts of Labrador and Newfoundland, “nothing to tempt avarice—a land of rock and ice did not invite settlement—the only “object of pursuit was either fish or oil, and these could only be procured by labour. “There was nothing to interest nobles and princes, who, with these principles were “the only objects of history at that day. Secondly, whaling partook of the mystery “attending every branch of industry, and which only the initiated were let into; this “spirit of mystery was so common in those times, that the court of Spain thought to “keep the discovery of Southern America a secret even fifty years after the voyage “of Columbus; and were, says Hume, both surprised and alarmed to find an English “merchant ship in these seas.”

Labrador is an immense peninsula extending over an area of four hundred and fifty thousand superficial miles, and bounded by the Atlantic, the Gulf of St. Lawrence and Hudson’s Bay. It is divided into three distinct regions; the middle one belongs to Canada and is bounded on the east by Blanc Sablon Bay, in the Straits of Belle Isle.

GENERAL REMARKS ON THE FISHERIES OF THE COAST OF LABRADOR, DURING THE SEASON OF 1877.

For two seasons past, the fishermen scattered on the barren and isolated coasts of Labrador had not much to complain of; their labours in the several industries carried on by them were crowded with success. It must be admitted that, in several places, provisions were dear during the present season and the price of fish was low; but, on the other hand, it must also be borne in mind that fish were more than usually plentiful and that vegetables, which are more or less cultivated in every place where sufficient land can be found to use a spade or hoe, yielded one hundred per cent. Owing to this improved state of things, a large number of fishermen are thus enabled to derive part of their subsistence from agriculture. The late comers or new arrivals have

given the example. At Kegashca, for instance, where about ten families from Newfoundland replaced the former Acadian settlers, they all have fine vegetable gardens. The few Acadian families permanently settled at Seven Islands also cultivate fine flats of land, the produce of which, added to their fishing, is sufficient for their winter supplies. Beautiful gardens are also met with at Sheldrake, Magpie, Thunder and St. John Rivers. The above named posts are occupied by people from the south shore, most of whom have good notions of the advantages to be derived from the cultivation of land when coupled with the pursuit of fishing.

In order to better illustrate the prosperous state and increasing importance of the north coast during the past few years, and especially during the present season, it will be sufficient to mention that the cod fishery yielded 56,246 quintals, without reckoning fish used for local consumption nor those caught by foreign vessels. Cod-fish sold at \$3.50 In 1876 it fetched \$5.00 a quintal, the yield being 42,907 quintals. The catch of salmon was 1,823 barrels in 1876, and 2,404 this year. The herring fishery yielded 3,575 barrels in 1876, against 6,028 in 1877. Seal hunting, which gave 5,841 pelts in 1876, produced 7,898 this season. Only 188½ barrels of mackerel were caught this season, reckoned at \$10 a barrel, whilst not a single barrel was taken in 1876. The same increase is noticed in seal and cod oils; the yield of the former being 41,800 gallons in 1877, against 33,577 in 1876, and of the latter 119,861 gallons in 1877, against 38,105 in 1876. These figures are sufficient to show the amount of business transacted on the north coast. The price of fish did not unfortunately keep pace with the increase in the yield; but, taken all together, the catch will amply compensate for the decrease in value.

Although most of the settlements on the north shore were favoured with a rich harvest from the sea during the past season, some are, however, met with where fishermen were not so successful. Amongst these must be reckoned the settlement at Esquimaux Point, although it is a well-known fact that fishermen from this locality belong to the most industrious and intelligent. This little village, which is substantially and elegantly built, had, from its origin until two or three years ago, enjoyed a most astonishing run of success. Its inhabitants succeeded in amassing considerable wealth; but a time of trial has arrived, and in spite of their labours and energy constant failure has attended their work since 1874. Those who, in previous years, had been enabled to save something for a stormy day, were compelled to withdraw it from the bank. Should the Government find it impossible to give them assistance, I am at a loss to understand how some of them will be enabled to manage through the winter, and should fishing again fail next year, most of the settlers will be compelled to abandon the post. This painful lesson which Providence has taught the Esquimaux Point people will, however, bear its fruits; the anxieties and deprivations of every kind will undoubtedly have the effect of making them more careful for the future. Most of them would be independent to day had they saved during the years of abundance. The wants of the last few years will put them on their guard, and teach them that the same misfortunes may again occur sooner or later. A great mistake on the part of the settlers at Esquimaux Point is that they utterly neglect to cultivate vegetables, for a supply of which they entirely depend upon strangers. Should fishing happen to fail, it will easily be understood how they are left without any resources whatever.

The increasing population, the incessant development of fishing industries, must necessarily create a demand for increased modes of communications. A trip to the North Shore was, until a few years ago, considered more difficult than going to Europe; but the coast of Labrador can now be visited either for pleasure or business in a very short time, and very comfortably too. Besides twenty-five or thirty schooners which are constantly engaged carrying fish from one shore to another, and vessels trading between Labrador, Quebec, Gaspé, Halifax, and St. John, Newfoundland, there are two packets chartered to carry the mails; one of them, under command of Capt. Pye, makes two monthly trips from Gaspé to the posts lying between Sheldrake and Natashquan; the other performs a similar service between Betsiamites and Moisie. The Steamship "Beaver," owned by Messrs. Fraser and Holliday, also makes regular trips during the fishing season between Quebec and Moisie.

I shall not repeat here what I have already urged in previous reports with regard to the urgency of extending the benefits of this mail service to other settlements on the coast, between Natashaquan and Bonne Esperance. A petition signed by all the inhabitants and most of the merchants and influential persons in Montreal and Quebec, will, I am confident, bring about this most desirable result, thus enabling people from these remote places to hold intercourse with large centres, and make known their wants and dangers, so that timely assistance may be sent them.

List of Freighting and Trading Vessels in the Mingan Division during the season of 1877 :—

Name of Vessel.	Tonnage.	Master.	Where Registered.
St. Anne de Beaumont	66	Gilbert McNeil,	Quebec.
Georgianna	47	Thomas Tremblay,	do
Mary	54	R. LeBlanc,	do
La Victoire	43	R. Duguay,	do
Ripple	78	François Lachance,	do
Palma	54	Jos. Desgagniers,	do
Lady Elgin	66	Caron,	do
Marie Eleonore	72	J. B. Mercier,	do
Notre Dames des Victoires...	55	Xavier Joncas,	do
Frank	54	Louis Dugal,	do
Flying Fish	48	Richard Miller,	Gaspé.
Sea Flower	36	John Ascah,	do
Wolverine	40	E. Adams,	do
Violet	37	Suddard,	do
Undaunted	45	Howell,	do
Speedy	65	B. Aslin,	do
Elie	116	John W. Pitts,	Halifax, N. S.
A. Carcand	70	Landry,	New Carlisle.
Paspebiac	57	John Moulin,	do
Ant	52	Abel Huard,	do
Isabella	45	J. Garrett,	do
Hasty	46	W. Lucas,	Jersey.
Two Friends	98	Hanquill,	do
Gleaner	60	F. LeBlanc,	do
Eddie Pierce	96	Hawes,	Boston.

Total 25 Vessels.

Cod Fishery.

I spoke in my previous reports of the first settlements made on the North coast for the purpose of carrying on cod-fishing. I then gave a short history of the expeditions undertaken by the Basques, French, and Spaniards as early as the 15th and 16th centuries; and I alluded to the powerful companies which took possession of the soil and waters and carried on seal hunting and fishing to the exclusion of other pursuits, totally disregarding cod-fishing, which only became of importance in 1850 when these companies lost their monopoly by successive failures in seal-fishing, and the arrival of fishermen from the south shore or from foreign countries, who had become aware of the inexhaustible wealth of the fishing banks located between Godbout and Blane Sablon.

I do not intend returning to this subject, but will confine myself to stating that cod fishing is now the staple industry of the people resorting to the north coast; that the principal source of wealth of these barren shores lies in its pursuit, and that the greater or lesser state of prosperity or want of the several families settled in this part of our Dominion is due to their success in codfishing.

It will be noticed that, this year's catch was much larger than that of last season,

the statistics showing that, exclusive of the fish used for domestic consumption and of that caught by foreign vessels, the catch by Canadian schooners amounted to 56,246 quintals, or 13,339 more than in 1876.

According to the Local Fishery Overseer's Returns for the Division of Bonne Esperance, one hundred and fifty schooners from the Maritime Provinces, Newfoundland, and United States visited that coast during the past season, and each of these vessels carried at least 500 quintals of fish, which, with an average of 150 schooners, would give about 75,000 quintals. This, added to the catch by our own schooners, gives a grand total of 131,246 against 104,707 in 1876, or an increase of 26,539 for 1877.

I used every season to supply the names of vessels engaged cod fishing on the north coast, and I intended doing the same this year, but other pressing duties connected with the Halifax Fishery Commission necessitated my presence elsewhere when these vessels were engaged cod fishing, and I am consequently unable to give the names of these vessels, or to furnish a detailed statement of their catch.

Cod appeared earlier than usual on the coast this season, especially on the eastern part of this division. This is undoubtedly due to the high temperature of the water, and to the fact that the Gulf was almost free from ice in March. Cod-fishing began as early as the 1st June at Blanc Sablon and Bonne Esperance, and about a fortnight later at Shelldrake, Magpie, St. John and Natashquan. The fish were so abundant everywhere that everyone anticipated an extraordinary catch. These hopeful expectations were unfortunately doomed to be disappointed. About the end of June or the beginning of July, stormy weather set in, causing the fish to seek deep water, where they could be caught only with additional trouble and difficulty, owing to strong currents and high winds. In spite of all these drawbacks, reference to the annexed statistics will show that on some parts of the coast, fishermen even did better than last year. At Bonne Esperance, for instance, the average catch was 175 quintals per boat; there is also a large increase in the Trinity, Moisie and St. John Divisions, whilst a slight decrease is noticeable at Watsheeshoo, Natashquan and Pacachoo. Fish were as abundant as ever according to the fishermen's own statements, but they would not bite. The reason of this is assigned to the fact that the grounds frequented by cod were full of capelin. At Pacachoo, the fishermen agree in stating that, had they been provided with seines, they could have caught 300 quintals of fish per boat instead of 50 which they did. Several of the Bonne Esperance Division fishermen are provided with seines, but the weather kept so rough during the time they might have been used, that they were comparatively of little service. Hand-line fishing on the banks of Bonne Esperance gave just as good returns as seining.

The Canadian shores were certainly privileged during the past season; fish were abundant on this side of the boundary, when none were to be found on that part of the coast belonging to Newfoundland. This state of things prevailed to such an extent that French vessels hardly averaged twenty quintals each, whilst other schooners fishing on the coast of Newfoundland entirely lost their voyage.

The high winds which prevailed during the greatest part of the summer seriously interfered with the pursuits of our fishermen. They relied upon fall fishing to compensate them for their loss of time; but the weather was so rough and stormy on the south as well as on the north coast, that they soon gave up all hopes of success. In some places, however, such as Moisie, Seven Islands, Cailles Rouges and Trinity, which are more sheltered than others, fall fishing was good, the fish being abundant everywhere; and a corresponding increase over last year's catch is accordingly noticed.

Being provided with seines, fishermen from Shelldrake took early advantage of the first appearance of cod. At Magpie, Thunder River and St. John, the average catch was about sixty quintals per boat. This is a little less than last year, although the statistics show an apparent increase in the quantity of fish caught; this fact is, however, due to an increase in the number of fishermen.

Hand-lines are mostly used by Canadian fishermen in cod fishing on the north shore. Baltows are also employed to a limited extent on the banks of Mingan, between the mainland and Anticosti. There are four or five seines at Sheldrake, but the fishing grounds are so rough that they can seldom be used. Bonne Esperance Division also owns four seines, and with the Department's permission, Messrs. Whitely and Buckle tried fishing with pound-nets for catching deep-sea fish. Their venture did not succeed, owing to prevailing stormy weather. They are not, however, discouraged, and confidently rely upon another year's success to compensate their loss.

The price of fish which was so remunerative in 1876, being then fixed to suit the merchants' fancies or purposes, could not long remain at such high figures, however desirous our fishermen may have been to have it so. In order to somewhat compensate the losses experienced in a previous year, these gentlemen had to take another extreme, and rate the price of fish at such low figures that it is a wonder how the fishermen could make a living, especially when provisions sold at exorbitant prices. At places on the coast where the monopoly of large firms is still felt, the price offered for cod was only \$3.00 a quintal, whilst flour sold at twelve, fifteen and even eighteen dollars a barrel, and other stores in proportion. Competition being keener on the eastern part of Labrador, which traders from Quebec, Halifax, Charlottetown and St. John, Newfoundland, visit, the fishermen fared somewhat better. At Bonne Esperance, Mutton Bay, La Tabatière and Kegashca for instance, flour sold at nine and ten dollars; molasses fifty cents; whilst the price of fish reached three fifty and even four dollars.

Most of the fish caught on the north shore is cured dry, except that taken after first September, which is sent to Gaspé, Halifax, and St. John, Newfoundland, for foreign markets. Fishermen procure their winter supplies with the sale of their green fish.

Although the fish cured on the north coast is considered somewhat inferior to that on the south shore, the former sells just as well, owing to keener competition amongst traders.

LIST of Schooners Fishing for Cod at Bradore Bay, Labrador, during the season of 1877.

Name of Vessel.	Master.	No. of Tons.	Port.	No. of Men.	No. of Capelin Seines.	No. of Cod Seines.	No. of Quintals Codish.
Aurora	J. Perchard.....	20	Bay of Islands	7	.....	1	150
George Frogg	J. Ryan.....	103	P. E. Island	18	.....	1	775
Sweet Home.....	Tupper	70	St. John's, Nfld.....	18	.....	2	580
Frank Erin	Petitpas.....	54	Shelburne.....	9	.....	1	376
Jannett.....	Jasper	50	Quebec.....	9	1	1	370
Maggie.....	Petitpas	25	Bay of Islands.....	6	.....	.....	175
Flora.....	Morris	54	Trinity Bay.....	11	1	1	340
Victoria	T. Bartellet.....	70	Bay of Islands.....	9	1	1	680
Dreadnaught	J. Hackett.....	15	Bonne Bay	5	.....	.....	130
Flash.....	Pike.....	42	Carbonear	12	.....	1	320
Rump	Isaac Crome	39	Bonne Bay	10	1	.....	300
Mary Emma	J. Kin.....	25	do	10	.....	1	188
Happy Home	J. Prodrick.....	64	Harbour Grace.....	8	1	1	614
Susanne	G. Murphy	31	Bay of Islands	10	.....	1	212
Bay Queen	N. Taylor.....	55	St. John's, Nfld.....	10	1	1	478
Sonora	S. Gass.....	30	do	7	.....	1	250
Garmamel.....	Quigley	30	do	8	.....	1	350
Total, 17 Vessels.....		777		167	6	15	6,288

List of Schooners Fishing for Cod at Bonne Esperance, Labrador, during the season of 1877.

Name of Vessel.	Master.	No. of Tons.	Port.	No. of Men.	No. of Capelin Seines.	No. of Cod Seines.	No. of Quintals Codfish.
Dial.....	Backman.....	60	Lunenburg.....	12	1	.....	50
S. Debel.....	Smith.....	42	do	13	.....	.....	350
Ellen Mary.....	Weston.....	56	do	17	1	.....	400
River Dale.....	Hoist.....	65	do	12	1	.....	525
L. Q. Batch.....	Wansle.....	70	do	14	.....	.....	600
Prince Consort.....	Echman.....	50	do	12	1	.....	375
Star.....	Welch.....	80	do	8	.....	.....	626
President.....	Saldiaque.....	75	Port au Basque.....	6	1	.....	574
City Queen.....	Sweeder.....	80	Mahone Bay.....	4	1	.....	650
Emily.....	Farrell.....	86	Lunenburg.....	14	1	.....	675
Lady Speedwell.....	Hekman.....	79	do	14	.....	.....	615
Letell.....	Ichkman.....	90	La Have.....	14	1	.....	700
Raspberry.....	Muirhead.....	66	St. John, Nfld.....	10	.....	.....	430
Total, 13 Vessels.....		899		150	8	.....	6,570

List of Freighting, Trading and Fishing Vessels anchored at Bonne Esperance during the season 1877 :—

Name of Vessel.	Tonnage.	Port.
Mariner.....	56	Lunenburg Co. N.S.
Quickstep.....	40	do
Dahlia.....	94	do
Harvest Home.....	59	do
River Queen.....	51	do
Vantage.....	50	do
Wellington.....	100	do
L. A. W.....	50	do
Island Gem.....	50	do
River Dale.....	50	do
Debel.....	50	do
Nimble.....	50	do
Anna.....	50	do
Rover Bride.....	50	do
Ellen May.....	50	do
L. P. Churchill.....	100	do
Constance...	50	do
Golden West.....	50	do
Prince Consort.....	50	do
Lady Speedwell.....	50	do
Ella.....	50	do
W. M. Volger.....	50	do
Adonis.....	50	do
Ida E.....	50	do
A. Teal.....	59	do
J. W. Arnold.....	80	Halifax, N.S.
Spotted Queen.....	40	do
Java	60	do
W. Book.....	50	do
H. C. Brown.....	60	do

Name of Vessel.	Tonnage.	Port.
Stadacona.....	120	Quebec.
Maria.....	120	do
M. Malvina.....	40	do
Delta.....	125	Newfoundland.
Speed.....	120	do
Otter.....	60	do
Capricious.....	30	do
Crown Point.....	130	Newbury port, U.S.
Hiawatha.....	100	do
Nellie H.....	50	do
Unique.....	100	Brixham, Eng.
Whim.....	120	do
H. Emmet.....	110	do
Total 43 Vessels.....	2,924	

Codfish Seining.

The schooners which annually repair to Labrador for codfishing, especially those from the Maritime Provinces, mostly use hand lines; but the greater number employ seines. Local fishermen from Blanc Sablon and Bradore Bay complain that these engines cause them to lose their season's fishing. No less than one hundred seines were constantly flying in these waters during the fishing season. There being no authority on the spot to compel parties using them to comply with the regulations made for the protection of hand-line fishermen, the latter were compelled to abandon the banks, being crowded out by seines, or else run the risk of losing their lines, anchors and grapnels. I hope I shall be able next season to be earlier on the grounds, in order to afford protection to these people.

Another injurious practice which fishermen in the Pacachoo Division also complain of, is that of schooners from Natashquan and Esquimaux Point throwing their old bait on the fishing grounds, thus spoiling the catch of local fishermen who are unable to shift from one place to another like those fishing in schooners. Warnings will, I dare say, be sufficient to put a stop to these practices, and I shall not fail to attend to these matters next season.

Seal Fishery.

The result of seal fishing during the past two seasons on the coast of Labrador created great surprise among fishermen, who, owing to successive failures during nearly twenty years past, were reduced to a great state of poverty, and felt compelled to resort to other industries which they very naturally were loth to follow, so great had been their former success in seal fishing.

On several occasions, I stated that the disappearance of seals from our shores was due to a decrease in the number of the species; and I was backed in this opinion by eminent naturalists and writers. Subsequent observations made by myself as well as by local fishermen led me, however, to assert in my report of last year, that this decrease was more apparent than real, and that the disappearance of these animals from our shores might in a great measure be due to their being inconsiderately killed in the Gulf as well as in the waters where they retire during the summer. I feel yearly more convinced of the soundness of this theory.

Seal fishing is practised with nets during the spring and fall. Towards the latter part of November, and during the month of December, these animals ascend the Straits of Belle Isle, in smaller or larger herds, nearing the shore through the floating fields of ice, and stopping only when nature prompts the females to climb on the ice to bring forth their young ones. Seals sometimes go up very high in the River St. Lawrence; the general opinion being that they ascend as far as the mouth of the Saguenay, but I believe that their progress is more or less influenced by a

prevalence of north-east winds. Large herds were noticed during the past two years opposite Pointe des Monts; in 1876, a schooner loaded with timber found herself caught in an ice field, near Godbout, upon which thousands of seals were gathered, and this spring the only schooners from Esquimaux Point which met with any success secured their cargoes of seals in the month of May, at St. Nicholas Harbour. Nets are set in the Division of Pacachoo to catch them when they are hugging the shores of the Strait of Belle Isle. The outfit is very expensive. Houses and stores have to be built, fixture erected; craft with nets, harness, leads, anchors, &c., to be procured; these, with tools, utensils and provisions cost several hundred dollars, sometimes thousands. I am informed that Mr. Robertson who sets for seals at La Tabatière, spends from seven to eight hundred dollars yearly to keep his nets in good repair.

The migrations of seals were formerly composed of large herds which seemed more numerous than the heads of cattle crowded in a narrow lane; this used to last for weeks then, but a steady falling off has ensued, and for the past twenty years when this spectacle had lasted for two or three days the season's fishing was over. An extraordinary and welcome change was, however, experienced last fall. Seals again appeared quite as numerous as formerly, and had it not been for a terrific storm which swept everything away on the coast during the month of December, the catch would have been highly satisfactory. Taking all together, however, there is no cause for grumbling. The five or six stands which were set this season caught 495 seals; a success unheard of since 1873. The catch amounted to barely fifty seals in 1876, when only two or three stations were fished.

The success which attended seal-fishing during the spring of 1876, as well as during the present season, goes far to strengthen the opinion of those who claim that these animals are just as numerous now as they were formerly. Five stations which were set in the spring between Bonne Esperance and Blanc Sablon caught 3,027 seals, valued at \$5.50 each, in 1876, and this season the same stands very nearly gave equal results. If any difference was felt, it was for the better. The oldest fishermen agree in stating that during the most prosperous seasons they never saw such large herds of seals along the coast.

I cannot ascribe this welcome change to any other cause than to the absence of steamers and sailing vessels in the Gulf, which was besides free from ice as early as the month of March. The seals being thus left unmolested, abandoned the floating ice when nature prompted them to do so, and finding their usual route free started at once for their natural haunts towards the Arctic seas.

Over 500 harbour seals were shot with guns or caught in nets on different parts of the coast; this gives a total quantity of 4,043, or an increase of 1,016 over the yield of last year.

As already remarked in the first part of this report, 1876 and 1877 were exceptional years for seal fishermen; their confidence in former luck has been restored, and they fully expect that next season's operations will be equally successful.

Seal Hunting on the Ice.

However premature it might appear on my part, after so limited an experience, to offer any remarks on the influence and result of the restrictive enactments adopted in 1876 by Newfoundland and European countries interested in the preservation of seals; it is not the less true that nothing but satisfactory results can accrue therefrom, provided always that the fitting out of sealing steamers is kept within legitimate bounds.

In addition to the steam vessels fitted in Newfoundland, our Dominion sends only a few schooners from Magdalen Island and Esquimaux Point to follow seal-hunting in the spring. This great source of wealth which has enriched outfitters from St. John, Newfoundland, Harbour Grace, and other small settlements round the Island, appears to be inexhaustible; and should the great success which attended last season's operations be only considered, it seems as if seals needed no special protection. It is in this very success, however, that I find the greatest source of

apprehension for the ultimate decrease and ruin of the species. Have not salmon, mackerel and cod, whose power of reproduction is so much greater than that of seal, been entirely exterminated in certain localities? How did walruses and whales come to be destroyed? Were the present outfitters satisfied with young seals three or four weeks old, a sufficiently large proportion of the species might be relied upon to maintain this industry; but I am afraid that the injudicious killing of old seals during the steamers' second voyages will ultimately bring complete ruin. When one considers the number of powerful vessels engaged in this pursuit, it is quite possible that sealing expeditions may, in a few years, be no longer considered remunerative.

Twenty-four steamers, manned by 4,000 men, and thirty-six sailing vessels, with crews of 2,658 sailors left Newfoundland this spring for the ice-fields. They met with wonderful success; the result of their expedition amounting to 412,000 seals, 43,000 of which were old ones killed during the second trip. Among the steamers fitted out for these voyages, two belonged to Dundee, in Scotland, and after taking crews of Newfoundlanders, repaired to the ice-fields. They had great success, and their captains who are practical men, state that they saw thirty seals in the neighbourhood of Newfoundland to one in Greenland.

Canadian sealers did not fare so well as those from Newfoundland, which were enabled to go out on the 10th March; they remained in the ice and could leave only by the latter end of May. Twenty schooners from Esquimaux Point and six from Natashquan fitted out this spring for seal-hunting; but out of that number, six only succeeded in covering the cost of outfit. They brought back 2,404 seals, which added to the number shot with guns or caught in nets, gives a grand total of 7,898, or an increase of 1,957 over 1876. Seal oil sold for forty-five cents, and pelts from \$1.25 to \$1.50.

Herring Fishery.

Fall fishing, without being very abundant, was, however, better than that of last year. The fish struck early in August at Bradore Bay and Blanc Sablon, and when caught at this period of the year, they are in their prime condition. Several schooners from Quebec which happened to be on the spot, secured early and cheap cargoes; but over one hundred vessels which, in the expectation of being able to get better and cheaper fares, went further down on the coast, lost their time and voyages. After visiting the shores at Bradore and Blanc Sablon, the fish appear to have taken to deep water and did not return.

The Esquimaux Point people, who usually rely upon the fall fishing for their winter provisions and supplies, hardly experienced better success than in 1876; twenty schooners caught only 3,972 barrels, against 1,463 in the previous year. This relative failure is much to be deplored, as it brings to an unsuccessful close an otherwise abundant season's fishing, and these poor people will, I am sure, impatiently await the arrival of spring to be ridden of the apprehensions and dangers of winter.

RETURN of the Number and Tonnage of Vessels and Men belonging to Esquimaux Point, engaged in Seal, Cod and Herring Fishing, during the Season of 1877:

Name of Vessel.	Master.	Where Registered.	Tons.	Men.	No. of Seals.	Codfish, quintals.	Herring, brls.
Elizabeth.....	Luke Cormier.	Quebec.....	27	7	40	180	160
Ste. Marie.....	Alex. Sherer.	do	37	8	13	90	304
Marie Louise.....	Mathias Roberge	do	14	6	120	40	100
Marie du Sacré Cœur..	Onesime Turbide	Gaspé.....	46	10	22	205	167
Labrador.....	Placide Doyle.	do	42	10	100	200	200
Progress.....	Nath. Bourdeau.	do	52	12	630	200	36
Iberville.....	Hyp. Boudreau.	do	41	10	400	240	36
Marie Anne.....	Dominique Landry.	do	35	8	200	170	130
Amelia.....	Paul Cormier.	do	50	10	100	220	310
Marguerite.....	J. B. Cormier.	do	27	8	150	100	200
Ice Bird.....	Villebon Terriault.	do	39	9	120	100	135
J. C. Miller.....	Amedée Vigneau.	Halifax.....	42	10	50	200	70
Acara.....	Andrew Vigneau.	do	29	6	60	.....	200
D. Cronan.....	Peter LeMarquand.	do	39	6	100	50	300
Ocean Bride.....	Charles Landry.	do	14	6	4	120	60
D. H. P.....	Samuel Doyle.	do	29	8	36	80	252
Victoria.....	Gabriel Cormier.	Amherst, C.E.	46	10	330	180	260
Fleetwing.....	Julien Boudreau.	do	47	10	360	160	466
Ailsa.....	Frank Cummings.	do	41	10	25	200	230
Gleaner	Benj. Landry.	New, not registered	40	10	5	150	356
Total Vessels 20....	.....	.....	737	174	2,865	2,885	3,972

Mackerel and Halibut Fisheries.

The fishery statistics of 1876 show that no mackerel were caught on the north coast during that season. This fact did not fail to attract our attention, and led us to regret the loss of such a precious source of wealth which our neighbours know so well how to take advantage of.

Without entering into lengthy details, nor intending in the least to propound new theories, I beg to say that practical observations made during the past nine years enable me to assert that the falling off experienced in the catch of mackerel is due to excessive fishing with seines by American schooners, as well as to the injurious practice of polluting the grounds with offals of fish.

Signs of improvement are, however, noticeable. No less than 188½ barrels of fish were caught this season on the north coast, and 227 on the south shore. Canadian fishermen, moreover, assert that mackerel resorted to our shores in large schools, and that the reason why the catch was so small is due to the fact that the number of men engaged in this fishery was comparatively limited. There is no doubt, however, that if we were allowed to pursue this fishery undisturbed by foreign vessels it would soon regain its former prosperity.

American authors who have written upon the migrations of fish, have, in order to depreciate the value of the privileges granted them, attempted to prove that the fish frequenting our Gulf, such as mackerel and herring especially, come from the waters bordering on the American coasts, and that their visits to our shores were purely accidental. This erroneous assertion was completely demolished by the Canadian Commissioner of Fisheries in his Report of 1872, as well as by the evidence of Professor Hind before the Halifax Commission. Several other scientific writers have also upset this theory and proved that it was brought forward in order to answer a special purpose. The more closely we look into this matter the more convinced we must feel that the fish frequenting our coasts during the summer season retire to deep water when the cold weather sets in; close by, however, to places where they were born, and where they find their usual food. One can easily understand how these migrations from deep water to the shore are more or less influenced by certain physical causes, such as winds, temperature of the water and the run of small fish upon which they feed, &c., &c. These causes accelerate or delay their appearance in certain localities, but it does not follow that the fish entirely disappear and retire into the ocean. Experience is there to prove the contrary.

So long as there is no ice in the Gulf, cod is found on all the banks; when the ice appears fish withdraw. But they cannot go very far, since they form the principal article of food for seals during the months of February and March. Seal hunters have seen codfish on the fields of ice which seals had taken there to feed upon. Moreover, is not codfishing carried on during the whole winter—and in deep water too—on the south-west shore of Newfoundland? And what is to prevent our own people from doing the same, were they enabled to go out far enough? The same mode of reasoning applies to mackerel. Whilst fishing in forty or fifty fathoms of water, during the month of May or early in June, Gaspé and Bay des Chaleurs fishermen often catch cod having a mackerel in their stomach, and these fish are sometimes full of eggs; a fact which proves that they must remain on the codfishing banks until the proper time has arrived for them to approach the shores.

Were mackerel a fish of foreign origin, propelled towards the coast by a caprice of nature or by mere chance, no reliance could be placed on the future or on the expectation of having our waters rapidly re-stocked. Besides, and were it even so, how could the regular visits of these fish during the past forty or fifty years be satisfactorily accounted for? In the steady falling off, as well as in the regular increase of this fishery, I find the proof of the assertions of the above quoted authorities. Were the presence of mackerel in larger or smaller number, due to annual migrations from southern seas, it is evident that irregularities would have ere this been noticed; but the fact that they have gradually diminished in proportion to the increase of fishing operations is ample proof that they do not migrate far out. I repeat it; the reason

why this fishery has failed during several years is not due to mere chance, but to a result of combined adverse actions which no fishing grounds could stand.

The experience of the past will, however, teach us what to do in order to prevent further destruction; and knowing as we do that the restocking of our waters does not depend solely upon a mere whim of nature, we will feel compelled to use every practical and efficient means to assist in restoring this former prosperity. Amongst the adoption of measures which will help to bring about this desirable result, I would strongly recommend the prohibition of mackerel seines within three miles from shore, and abolishing the practice of throwing offals on the fishing grounds.

Only a few American schooners were noticed this season in the Gulf, perhaps not more than one hundred and fifty, and of this number four or five, at most, entered Gaspé and Bay des Chaleurs. The average catch of these vessels may have amounted to 135 barrels. This is very little; but prices ruled so high that, though small, the catch was found to be remunerative. Mackerel sold from \$10 to \$18 in Halifax, and I am informed that it went as high as \$20 in the States. On the north coast it sold for \$7 on the spot, without barrels, whilst at Gaspé it barely realized \$3 or \$4.

Halibut fishing is another industry which American fishermen have destroyed on our coasts. The catch for this year amounts to only 101 barrels, against 87 in 1876. Our people did not much engage in halibut or mackerel fishing during the past season; it would, moreover, be useless for them to do so now that these pursuits have almost been given up by American schooners, owing to their unproductiveness. But the value of halibut fishing is at the present time thoroughly understood by our people; and owing to its being so easily carried on and the increased facilities of transport, I have no doubt but, that should any improvement be noticed, they will not be behind others in taking advantage of this fishery.

Salmon Fishery.

One might almost think that Providence delights in surprising the inhabitants of the north coast, so varied are the good fortunes which sometimes exceed their expectations. This, I presume, is intended to restore their failing confidence, which threatened to give way two or three years ago. It has already been stated that seal-hunting and fishing were abundant in 1875 and 1876; mackerel also visited the shores of Pacachoo division in large numbers, and at Bonne Esperance, the catch of herring was the best known for ten years past, both in quality and quantity. To this success must be added the yield of the salmon fishing, which was fast threatening ruin, when your Department fortunately took it in hand. It is yearly assuming greater importance, and spreads abundance amongst settlers of this inhospitable region.

Salmon fishing on the north coast was generally better than that of two seasons past, although the stormy weather experienced at the beginning, materially interfered with this pursuit, and caused considerable damage among outside stands. The estuary fishings, however, as well as the stations sheltered against the wind, yielded double the catch of last season. In 1876 streams kept very high, and salmon fishing was seriously influenced thereby, although this state of things is not to be altogether regretted, as the work of reproduction is better secured when waters keep high; the fish ascending at once to their breeding grounds without stay in the estuaries, and should other circumstances prove equally favourable, the catch is greatly increased.

Salmon made its appearance very early this season on the north coast, especially on that part which is known as the coast of Labrador, and when the nets were set it was found that the fish had already gone up in large numbers. This, of course, occasioned the loss of a few fish, but it will be to the ultimate advantage of another season. Stormy weather played great havoc among the outside stands at Trinity, Moisie and Natashquan, causing considerable loss to fishermen. Taking, however, all these drawbacks into consideration, the yield amounts still to 2,404 barrels, against 1,825 in 1876.

The following figures show where the increase took place :

Moisie.....	445	barrels against 200 in 1876.
St. John.....	212	" 110 "
Natashquan	313	" 283 "
Mingan	54	" 32 "
Little Watsheeshoo.....	16	" 5 "
Kegashca	36	" 30 "
Romaine.....	24	" 22 "
St. Paul.....	54	" 50 "

Several other small streams also exhibit corresponding improvement.

A large increase was also noticeable in trout-fishing. The rivers which yielded most were Pentecost, Moisie and St. Augustine. The statistics reekon the total catch at 147 barrels, against 80 last year ; and to these figures must be added at least ten barrels used for home consumption. Manitou River, a branch of the Mingan, did not yield as much as usual ; this is, however, due to the fact that it was not fished to such an extent as in former years. About three barrels of trout were caught with the fly, and a personal visit which I paid to this river enables me to state that it is full of fine fish.

Moisie was the only river where fly fishing was practised during the present season, and the anglers' score amounted to 107 salmon against 68 in 1876. At Natashquan, the late Dr. Beaubien went twice to the falls, and caught about fifteen fish. At Washecootai, Mr. Molson only caught one salmon and a large number of trout ; but it must be remembered that this stream was completely ruined through the illegal fishing practised in it during the summer of 1876, by William Foreman and his friends. This conduct on the part of Foreman deserved more than exemplary punishment. He was engaged as private guardian to Mr. Molson ; received liberal wages, and was considered a faithful servant. Foreman ill requited this kindness. He invited his neighbours to share with him in the pillage of the river ; he guided them, worked with them, and left only when there was nothing more to destroy. From reliable information, I cannot estimate at less than thirty or forty barrels the quantity of salmon killed on the spawning beds. Being advised of these violations of the law late in the fall of 1876, I was unavoidably compelled to postpone proceedings until the following spring. So soon as we arrived at Kegashca, summons were issued against the following parties :—

William Foreman ; James Foreman, his brother ; François Germain ; Samuel Reid ; George Harrison and George Buckland. On sighting the Fisheries Protection Steamer in the offing, William Foreman immediately took to the bush, and it was only during the fall, with great difficulty and after several failures, that we succeeded in catching our man. The above named parties all pleaded guilty. James Foreman was fined \$30 ; Harrison and Buckland, \$10 ; German, \$5, and Reid, \$2.50. The two latter were poor men, and Reid, evidently in an advanced state of consumption. They were also the means of my being able to bring the other parties to justice. William Foreman was subsequently arrested and fined \$40, or two months in jail. He had not the money, but his mother paid for him.

About the same time I also prosecuted and fined a party named Dositee Deraspe, who had caught salmon illegally in Romaine River.

The Division of Watsheeshoo is one of the most important on the north coast, owing to the variety and abundance of its fisheries, as well as the large number of strangers who annually go there. Being insufficiently supplied with fishery guardians, it is almost impossible to do more than has been done to protect it. We have, indeed, accomplished a great deal by punishing violations of the law in such exemplary manner, but there is an organization on foot to deceive us, and the greater the punishment, the more cunning will be the plans devised to recover in an illicit manner what has been lost through legal process. Should no effectual check be put upon these illegal practices, the inhabitants of this part of the coast will, in a few

years, succeed by their own folly and depredations in destroying their greater source of wealth, and will then be compelled to remove to other localities.

Although, generally speaking, salmon fishing may be said to have been good on the north coast, the profits were not so large as might have been expected, owing to the very low price of the fish, which hardly sold for \$8, \$9 and \$10 a barrel. The license fees were, in consequence, very difficult to collect, several fishermen being unable to pay during the season.

FISHERY OVERSEERS.

In my reports of 1875 and 1876 I drew your attention to the importance of having active and efficient men to act as Fishery Guardians, and I am happy to be able to state that a great improvement has taken place in this respect since the last appointments were made. I also alluded to the absolute necessity of establishing new fishing districts and placing a couple of additional officers on certain portions of the coast which are still without any protection. I have already explained why the Watsheeshoo district is one of those which must be brought under your special consideration. This division comprises four important streams: Kegashea River, which yielded thirty-six barrels; Musquaro River, five barrels; Washeecootai River, seventeen barrels; and Romaine River, twenty-four barrels of salmon. I feel, moreover, convinced that if these rivers were not so unmercifully poached as they are, in spite of all our endeavours and the strictest possible guardianship, they would yield double the above quantity.

Besides salmon fishing, this division has codfishing banks, which are deemed equal to the best on the coast. From twenty-five to thirty schooners fished there this summer. Washeecootai Bay is also renowned for the abundance of its herring, and about thirty schooners from the Maritime Provinces and the States took their cargoes there this spring, some of the fish being exported direct to Norway. We could not, unfortunately, procure reliable returns of their catch, the local fishery guardian at Natashquan being unable to visit the locality. His time is wholly engaged in guarding the river under his charge, and visiting twenty-one miles of coast between Natashquan and Kegashca.

Another inconvenience arising out of the absence of an additional guardian in this division is the following: Any one will understand how the large number of vessels which resort to Kegashca and its neighbourhood must necessarily bring an influx of population. When not otherwise engaged, these people are left to themselves, and being aware that there is nobody to enforce the law and protect the inhabitants, they are led to commit all sorts of mischiefs, set fires to the bush, and destroy large tracts of timber lands which might be made use of for building purposes or for firewood. These fires also frighten away the fur-bearing animals and the birds of the forest. Occurrences of this nature took place last spring, and when we visited the locality not a bird was to be seen where thousands were met with in previous seasons. It is therefore of the utmost importance that a local fishery guardian be appointed for this division. The district of Natashquan is sufficiently extensive to engage the undivided attention of one man during the whole fishing season. The money spent in paying the wages of a guardian at Washeecootai will soon be reimbursed by an increase in the catch and the additional revenue derived from new leases and licenses.

Another division which is not so well protected as it should be, is the Godbout division. It extends from Manicouagan to Point des Monts, and comprises several important salmon stations, as well as three rivers: Godbout, Mistassini, and Beescie. Trading vessels frequenting the place are numerous, and their crews are sometimes difficult to manage. Were it placed under my jurisdiction, I might be of service to the local guardian, who not being a magistrate cannot therefore do much to improve upon the present state of things. I would therefore suggest for the greater advantages of this part of the coast, as well as for the benefit of fishermen frequenting it, that it be placed under my control, in the same manner as other parts of the Gulf.

INDIANS OF THE NORTH SHORE.

A fact worthy of note is that Indians, as well as White men, were unprecedently favored during the past few years on the north coast, without being quite so fortunate as in previous seasons, the former had no reason to complain of the success of their hunt. It was sufficient to procure the most necessary wants, and this they consider a great comfort. These poor children of the forest request no more from their friends on the sea shore. It was also remarked that their health had greatly improved of late; this is undoubtedly due to the fact that they were enabled to procure sufficient food during their painful peregrinations among the forests, rocks and lakes.

Three or four years ago, when these Indians were nearly starving on the coasts of Labrador, after experiencing an unsuccessful hunt, in which they nearly all perished, parties who took an interest in them made representations on their behalf, and succeeded in securing them assistance in money as well as in provisions, and the privilege of fishing a salmon stand in the immediate neighbourhood of Mingan River. They could not, however, muster sufficient energy to fish this station, a proof that any other labour than that of hunting or spearing is repugnant to their tastes. When they had caught a few salmon they allowed the nets to be washed ashore, and had it not been for Mr. Scott, the Hudson's Bay Company's Agent, these would have been left to rot on the beach. The same thing occurred this season, so that in order to derive some advantage from the special favor granted them by your Department, I took upon myself to hire a man who will fish this station for their benefit next year. For this purpose I concluded arrangements similar to those made with the person who has charge of the Restigouche Indians' station.

The tribe of Mountaineers, numbering from eighty to ninety families, which usually visits Mingan every year at Mission time, divided last season. Only ten families came to Mingan; the rest went to Natashquan, where provisions are more easily procured during this kind of Indian holiday.

RETURN OF FISHING STATIONS, kinds of Vessels, number of Men, kinds of Nets used, kinds of Fish and Fish Oil, &c.

LABRADOR DIVISION.

Name of Place.	Fishing Boats.			Flat Boats.			Nets and Seines.			Herring Seines.		
	Vessels.	No.	Value.	No.	Value.	No.	Salmon Nets.	Cod Seines.	No.	Yards.	Value.	%
Manicouagan.....	2	67	600	8	4	25	1	10	12	40	40	.....
St. Nicolas.....	2	94	2,096	17	6	236	1	6	16	40	40	.....
Godbout	6	100	100	2	3	220	1	7	19	324	324	.....
Poïne des Monts.....	1	8	100	2	3	67	2	10	7	80	16	.....
Trinity Bay and River.....	1	125	3,840	25	7	685	2	29	62	306	85	.....
Petit May River.....	5	125	3,250	25	7	174	4	18	14	220	40	.....
Islets à Caribou.....	.....	.....	.....	.....	.....	.....	2	14	2	272	93	.....
Little Trinity River.....	.....	.....	.....	.....	.....	.....	2	13	2	272	93	.....
Oalumet River.....	.....	.....	.....	.....	.....	.....	2	10	31	.....	.....	.....
Poïne aux Anglais.....	.....	.....	.....	.....	.....	.....	1	50	1	.....	.....	.....
Rivière Penteconté.....	.....	.....	.....	.....	.....	.....	1	14	14	.....	.....	.....
Oaïles Rouges.....	.....	.....	.....	.....	.....	.....	1	6	2	.....	.....	.....
Pointe des Gâwees.....	.....	.....	.....	.....	.....	.....	1	4	2	.....	.....	.....
Rivière Ste. Marguerite.....	6	98	2,450	22	8	260	23	24	40	21	7,110	265
Sept. Isles.....	4	73	2,250	16	8	250	8	72	20	12	2,900	130
Moisie .....	.....	.....	.....	.....	.....	.....	36	40	88	53	23,450	4,836
Figon.....	.....	.....	.....	.....	.....	.....	18	780	4	36	7	.....
Shallow River.....	.....	.....	.....	.....	.....	.....	6	480	2	24	12	6
Sheldrake.....	.....	.....	.....	.....	.....	.....	70	5,640	26	289	141	83
Primrose Cove.....	.....	.....	.....	.....	.....	.....	2	160	30	4	4	4
Thunder River.....	.....	.....	.....	.....	.....	.....	32	2,580	9	108	64	47
Indian Harbour.....	.....	.....	.....	.....	.....	.....	12	950	5	82	24	17
Ridge Point.....	.....	.....	.....	.....	.....	.....	18	1,080	7	70	36	17
Jupitagan .....	.....	.....	.....	.....	.....	.....	2	60	2	20	2	3
Magpie .....	.....	.....	.....	.....	.....	.....	84	5,895	29	304	168	129
Magpie River.....	.....	.....	.....	.....	.....	.....	2	80	2	300	100	4

LABRADOR DIVISION.—Continued.

NETS AND SEINES.

Name of Place.	Herring Nets.	Mackerel Seines.	Mackerel Nets.	Capelin Seines.	Lanace Seines.	Seal Nets.	Brush Fisheries.	Trout Nets.
	No.	Yards.	No.	Yards.	No.	Yards.	No.	Yards.
Manicouagan .....	.....	.....	.....	.....	.....	.....	.....	.....
St. Nicolas	1	40	12	.....	.....	.....	.....	.....
Godbout	1	60	16	.....	.....	.....	.....	.....
Pointe des Monts	1	60	20	.....	.....	.....	.....	.....
Trinity Bay and River	1	60	10	.....	.....	.....	.....	.....
Petit May River	1	30	10	.....	.....	.....	.....	.....
Islets à Capibon .....	.....	.....	.....	.....	.....	.....	.....	.....
Little Trinity River .....	.....	.....	.....	.....	.....	.....	.....	.....
Oalamet River .....	.....	.....	.....	.....	.....	.....	.....	.....
Pointe aux Anglais	12	648	128	.....	.....	.....	.....	.....
Rivière Penticôte .....	.....	.....	.....	.....	.....	.....	.....	.....
Cailles Rouges .....	.....	.....	.....	.....	.....	.....	.....	.....
Pointe des Gawees .....	.....	.....	.....	.....	.....	.....	.....	.....
Rivière Ste. Marguerite	2	36	30	.....	.....	.....	.....	.....
Sept Isles .....	.....	.....	.....	.....	.....	.....	.....	.....
Moisie .....	.....	.....	.....	.....	.....	.....	.....	.....
Pigora	3	108	30	.....	.....	.....	.....	.....
Shallow River	3	108	10	.....	.....	.....	.....	.....
She Ildrake	1	36	36	.....	.....	.....	.....	.....
Primrose Cove	1	169	36	.....	.....	.....	.....	.....
Thunder River	3	169	36	.....	.....	.....	.....	.....
Indian Harbour	1	36	15	.....	.....	.....	.....	.....
Ridge Point	2	72	34	.....	.....	.....	.....	.....
Japitagan	20	610	288	.....	.....	.....	.....	.....
Magpie	2	50	24	.....	.....	.....	.....	.....
Magpie River	2	50	24	.....	.....	.....	.....	.....

LABRADOR DIVISION.—Continued.

Name of Place.	NETS AND SEINES.					
	Vessels. No.	Fishing Boats. No.	Flat Boats. No.	Salmon Nets. No.	Cod Seines. No.	Herring Seines. No.
St. John River.....	1	26	400	3	\$	\$
Long Point.....	.....	.....	.....	83	5,590	27
Mingan River.....	.....	.....	.....	41	1,850	21
Romaine River.....	.....	.....	.....	.....	2	25
Bequiauau Point.....	20	737	26,220	174	54	1,359
Bechonian.....	4	165	3,800	8	13	364
Attepetal Bay.....	.....	.....	.....	.....	1	8
Piashier Bay.....	.....	.....	.....	8	130	3
Cornelle.....	.....	.....	.....	.....	15	5
Grand Wabashoo.....	.....	.....	.....	2	14	4
Little Wabashoo.....	.....	.....	.....	1	60	2
Nabissipi.....	.....	.....	.....	4	192	4
Agnawauus.....	.....	.....	.....	4	192	4
Washitawooka Bay.....	1	38	300	4	320	5
Natashquan Harbour.....	.....	.....	.....	11	512	9
Natashquan.....	5	106	2,520	31	48	2,880
Natashquan River.....	.....	.....	.....	20	672	12
Kegashka River.....	1	4	125	2	7	420
Kegashka Harbour.....	4	99	4,480	19	10	480
Masquaro.....	.....	.....	.....	1	1	15
Washeecoutai River.....	.....	.....	.....	1	30	3
Washeecoutai Point.....	.....	.....	.....	1	10	2
Mistassini Point.....	.....	.....	.....	1	10	1
Romaine River.....	10	20	3	39	4	20
Coacachoo.....	1	1	50	2	20	3
Etamaniou.....	24	24	24	5	380	84
					8	400
						120

RETURN OF FISHING STATIONS, kinds of Vessels, number of Men, kinds of Nets used, kinds of Fish and Fish Oils, &c.—Continued.

LABRADOR DIVISION.—Continued.

NETS AND SEINES.

57

Name of Place.	Herring Nets.	Mackerel Seines.	Mackerel Nets.	Capelin Seines.	Launce Seines.	Seal Nets.	Brush-Fisheries.	Trout Nets.
	No.	Yards.	No.	Yards.	No.	Yards.	No.	Yards.
St. John River.....	3	164	38	...	6	338	360	166
Long Point.....	...	...	...	...	7	314	4	272
Minigan River.....	...	...	...	...	310	9	260	450
Romaine River.....	...	...	...	...	...	...	...	...
Espuimaux Point.....	14	730	209	...	5	380	416	...
Bechouan.....	5	225	45	...	...	...	...	...
Ateepeial Bay.....	2	40	5	...	...	...	...	...
Piashier Bay.....	...	...	...	...	...	...	...	...
Cornelle.....	...	...	...	...	...	...	...	...
Grand Watsheeshoo.....	...	...	...	...	...	...	...	...
Little Watsheeshoo.....	...	...	...	...	...	...	...	...
Nabissipi.....	...	...	...	...	...	...	...	...
Agwanus.....	...	...	...	...	...	...	...	...
Wahtawooka Bay.....	2	40	38	...	2	240	140	...
Natashquan Harbour	27	1,060	316	...	2	90	120	...
Natashquan.....	...	...	...	...	2	...	...	...
Natashquan River.....	6	240	72	...	3	90	49	...
Kegashka River.....	2	50	20	...	200	220	...	...
Kegashka Harbour.....	19	510	184	...	1	50	25	...
Misquaro.....	...	...	...	...	...	...	...	...
Washuecontai River.....	...	...	...	...	...	...	...	...
Washuecontai Point.....	...	...	...	...	...	...	...	...
Mistassini Point.....	...	...	...	...	...	...	...	...
Romaine River.....	...	...	...	...	...	...	...	...
Coacoochoo.....	...	...	...	...	...	...	...	...
Etamamion .....	...	...	...	...	...	...	...	...
					10	340	132	...

LABRADOR DIVISION.—Continued.

Name of Place.	NETS AND SEINES.			
	Vessels.	Fishing Boats.	Flat Boats.	Herring Seines.
Pointe du Mourier.....				
St. Mary's Island.....				
Watoghkeetic Island.....				
Netagamion River.....				
Harrington Harbour.....	1	4	100	2
Little Meccatina.....				
Gull Island, Meccatina.....				
Providence Island.....	1	6	80	3
Whale's Head, Meccatina.....	1	29	800	3
Baie des Moutons.....	1			
Grand Meccatina.....				
Baie Rouge.....				
Grand Meccatina Island.....				
Tabatiere.....				
Sandy Cove.....				
Salt Lake, Tabatiere.....				
Fonderie Fecteau.....				
Kikapoe Island.....				
Kikapoe River.....				
Pointe Rouge, Pocachoo.....				
Whale's Head, Pocachoo.....				
Little Rigotet.....				
Big Rigotet.....				
Long Island.....				
St. Augustine Island.....				
River Island, St. Augustine.....				

LABRADOR DIVISION.—Continued.

NETS AND SEINES.

LABRADOR DIVISION.—*Continued.*

Name of Place.	Vessels.	Fishing Boats,		Flat Boats,		Nets.		Salmon Nets.		Cod Seines.		Herring Seines.	
		No.	Tons.	No.	Tons.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
St. Augustine River.....						2	\$24	2	\$5	400	100		
St. Salt Lake, St. Augustine.....						1	4	5	300	75			
Dog Island, St. Augustine.....						2	16	2	14	580	185		
Sandy Island.....						2	32	2	10	560	180		
Pointe à Giroux.....						1	12	1	3	186	46		
Canso Harbour.....						3	32	4	10	680	170		
Mimistaneque Island.....						1	16	2	2	300	75		
Chicatoca.....						2	24	1	4	60	12		
Nabittipi River.....						1	48	1	8	1	140	20	
Bull Cove.....						1	20	1	10	2	40	20	
Bay of Rocks.....						1	100	2	40	1	200	100	
Lydias Cove.....						4	160	3	40	4	300	150	
Dog Island.....						1	20	1	20	2	200	100	
Pêche à Lizotte.....						1	20	3	100	2	1	100	
Old Fort Island.....						3	....	2	40	2	1	4	
Burnt Island.....						3	70	4	60	6	1	100	50
Esperance.....						2	100	2	40	2	6	100	
St. Paul's River.....						10	830	9	340	20	13	1	200
Pigeon Island.....						1	20	2	20	10	400	400	
Stick Point.....						3	200	3	100	6	4	2	200
Salmon Bay.....						4	300	3	150	8	4	4	300
Little Fisheries.....						20	30	2,090	17	860	44	2	400
Five Leagues.....						1	100	2	30	2	1	200	1,700
Middle Bay.....						1	100	2	40	4	1	1	200
Belles Amours.....						1	20	1	200	1	1	1	50

LABRADOR DIVISION.—Concluded.

NETS AND SEINES.

LABRADOR DIVISION.—Continued.

Name of Place	Vessels.	Fishing Boats.	Flat Boats.	NETS AND SEINES				Herring Seines.
				No. of Fishermen.	No. of Shoremen.	Salmon Nets.	Cod Seines.	
Bradore.....	.....	.....	.....	\$	\$	\$	\$	\$
Basin Island.....	.....	.....	.....	1	40	1	20	.....
L'Anse des Dunes.....	.....	.....	.....	1	40	1	30	.....
Long Point.....	.....	.....	.....	1	60	2	6	.....
Number of Schooners from United States, Newfoundland and the Maritime Provinces, fishing for Cod within the Division of Bonne Esperance.	1	38	1,000	5	4	200	8	.....
150	12,000	300,000	1,500	150	6,000	150	1,500	1,000
Total.....	217	13,915	358,260	1,868	968	49,635	680	8,689
				No.	Yards.	Arsds.	Yards.	No.
				Value.	Value.	Value.	Value.	Value.
				\$	\$	\$	\$	\$

RETURN OF FISHING STATIONS, kinds of Vessels, number of Men, kinds of Nets used, &c.—Continued.

LABRADOR DIVISION.—Continued.

NETS AND SEINES.

Name of Place.	Herring Nets. Yds.	Mackerel Seines. No.	Mackerel Nets. No.	Capelin Seines. Yards. No.	Launce Seines. Value. Yards. No.	Seal Nets. Value. Yards. No.	Brush Fish- eries. Value. Yards. No.	Trout Nets. Value. Yards. No.
Bradore.....	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
Basin Island.....	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
L'Anse des Dunes.....	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
Long Point.....	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
Number of schooners from United States, Newfoundland, and the Maritime Provinces, fishing for Cod within the Division of Bonne Esperance.....	.....	.....	.....	.....	150 15,000	7,500.....	.....	.....
Total.....	191 7,389	2,136	1,300 400 13,560 144 223 19,435 11,500 33 1,256 2,496 196 14,347 11,498 3,130 66 1,347 274					

RETURN OF FISHING STATIONS, kinds of Vessels, number of

LABRADOR

NAME OF PLACE.		Salmon, Cured, barrels.	Salmon, Fresh, in ice, lbs.	Salmon, in cans, lbs.	SUMMER FISHING.	FALL FISHING.	
		Cod, quintals.	Cod, quintals.	Cod, smoked, boxes.	Cod, quintals.	Haddock, quintals.	Herring, barrels.
Manicouagan.....	1						
St. Nicolas.....						230	
Godbout.....		5754				75	
Pointe des Monts.....	5					591	
Trinity Bay and River.....	30	2812				6	
Petit May River.....	1 $\frac{1}{2}$	363				215	
Islets à Caribou.....	19 $\frac{1}{2}$	312				880	
Little Trinity River.....	9	550					
Calumet River.....	5 $\frac{1}{2}$						
Pointe aux Anglais.....						759	
Rivière Pentecôte.....						410	38
Cailles Rouges.....						416	233
Pointe des Cawees.....						30	6
Rivière Ste Marguerite.....	29				175	1328	7
Sept Isles.....	2				220	660	4
Moisie.....		135711			1400	1975	29
Pigou.....					600	600	2
Shallop River.....					350	50	1
Sheldrake.....	8				4277	370	
Primrose Cove.....					75	22	2
Thunder River.....					3530	257	1
Indian Harbour.....					850	20	
Ridge Point.....					1080	40	
Jupitagan.....	22					20	
Magpie.....					5627	718	
Magpie River.....	98					20	
St. John River.....	212					5225	660
Long Point.....	2				1813	450	2
Mingan River.....	50						14
Romaine River.....	6						16
Esquimaux Point.....					2880	5	
Betshouan.....					308		
Ateepetal Bay.....	5	10					
Piashter Bay.....	3 $\frac{1}{2}$	18			59	12	
Corneille.....	20						
Grand Watsheeshoo.....						10	
Little Watsheeshoo.....	16 $\frac{1}{2}$						
Nabissipi.....	30					120	
Agwanus.....	21					190	
Washtawooka Bay.....						460	
Natashquan Harbour.....						1480	
Natashquan.....	41					726	
Natashquan River.....	319	233				597	
Kegashka River.....	36					25	
Kegashka Harbour.....						294	100
Musquo.....	5						
Washeecoutai River.....	17	12					
Washeecoutai Point.....	10						
Mistassini Point.....	1					2	
Romaine River.....	24						
Coacoachoo.....	10					4	
Etamamiou River.....	40						

Men, kinds of Nets used, kinds of Fish and Fish Oils, &c.

DIVISION.

RETURN OF FISHING STATIONS, kinds of Vessels, number of Men,

LABRADOR

NAME OF PLACE	Salmon, Cured, barrels.	Salmon, Fresh, in ice, lbs.	Salmon, in cans, lbs.	Salmon, Smoked, boxes.	SUMMER FISHING.	FALL FISHING.	
					Cod, quintals.	Cod, quintals.	Haddock, quintals.
Pointe du Mourier	5 ¹ ₂				2		
St. Marys Island					25		
Watagheistic Island.....					25		
Netagamiou River.....	5				304	54	
Harrington Harbour.....	3				95		
Little Meccatina.....	5						16
Gull Island, Meccatina	2 ¹ ₂				92		
Providence Island.....	2 ¹ ₂				244		
Whale's Head, Meecatina	23 ¹ ₂				400	70	
Baie des Moutons	29				50		
Grand Meccatina	10				41		
Baie Rouge	9				21		
Grand Meccatina Island	8				189		
Tabatière	6				50		3
Sandy Cove					14		
Salt Lake, Tabatière	4 ¹ ₂						
Fonderie Fecteau	4						
Kikapoe Island	6						
Kikapoe River	2						
Pointe Rouge, Pacachoo	8						
Whale's Head, Pacachoo	10				3		
Little Rigolet	7						
Big Rigolet	6 ¹ ₂						
Long Island					18		
St. Augustine Island	2				80		
River Island, St. Augustine	12						
St. Augustine River	16						
St. Augustine Bay	8						
Salt Lake, St. Augustine	24						
Dog Island, St. Augustine	36				8		
Sandy Island	14 ¹ ₂				20		
Pointe à Giroux	23				20		
Canso Harbour	5						
Mistanoque Island	2				50		
Chicatoca	4				70		
Nabittipi River					30		
Bull Cove	15					80	
Bay of Rocks	10					200	
Lydias Cove	12					10	
Dog Island	12					30	
Pêche à Lizotte	5						
Old Fort Island					300		
Burnt Island	3					60	
Bonne Esperance	15					2,490	
St. Paul's River	54						200
Pigeon Island	10					700	
Stick Point	20					700	
Salmon Bay	18					5850	
Little Fisheries	14					50	
Five Leagues	7					100	
Middle Bay	2					25	
Belles Amours						20	

kinds of Nets used, kinds of Fish and Fish Oils, &c.—*Continued.*

DIVISION.—*Continued.*

RETURN OF FISHING STATIONS, kinds of Vessels, number of Men

LABRADOR

NAME OF PLACE.	Salmon, cured, barrels.		Summer Fishing.		Fall Fishing.	
Bradore.....					20	
Basin Island.....					20	
L'Anse des Dunes.....	3				40	
Long Point.....	1			250		
Taken by schooners from United States, Newfoundland and the Maritime Provinces.....			75000			
Total	1604	145775		120183	11063	6 $\frac{1}{2}$ 6028 $\frac{1}{2}$

Fly Fishing :—River Godbout.....
do do Moisie.....
do do Washeeeotai

do do Natashquan

Total.....

kinds of Nets used, kinds of Fish and Fish Oils, &c.—*Concluded.*

DIVISION.—*Concluded.*

Herrings, Smoked boxes,	Mackerel, barrels.	Seals, Whales and Porpoises.	Oils.	Fish and Clams used as Bait and Manure.
		No. of Seal Skins.		
		No. of Whales.		
		No. of Porpoises.		
		No. of Porpoise Skins,		
			Seal Oil, Gallons.	
1882	139½	2	6 7898	7898
			1	11
			41800	2262
			35	119861
				132
				121569
				11
				3382
				5000
				5171½
				5,754 pounds, salmon.
				2,081 do
				12 do
				233 do
				8,080 do
				Lobsters, lbs.
				Fish used for local consumption, barrels.

RECAPITULATION.

YIELD and Value of the different Fisheries of the Labrador Division in 1877.

Kinds of Fish.	Quantities.	Prices.	Value.
		\$ cts.	\$ cts.
Summer Cod fishing.....	120,183 quintals, at...	5 00	600,915 00
Autumn do	11,063 do	5 00	55,315 00
Mackerel.....	188 $\frac{1}{2}$ barrels,	10 00	1,885 00
Herring.....	6,028 $\frac{1}{2}$ do	5 00	30,142 50
Salmon, pickled.....	1,604 do	12 00	19,248 00
do fresh, in ice.....	145,775 lbs.,	0 05	7,288 75
Trout.....	139 $\frac{1}{2}$ barrels,	8 00	1,116 00
Tunny.....	2 do	5 00	10 00
Halibut.....	62 $\frac{1}{2}$ do	6 00	375 00
Cod Tongues and Sounds	6 do	9 00	54 00
Seal Skins.....	7,898 pieces,	1 25	9,872 50
Porpoise Skins.....	11 do	4 00	44 00
Seal Oil.....	41,800 gallons,	0 50	20,900 00
Cod Oil.....	119,361 do	0 50	59,930 50
Porpoise Oil.....	35 do	0 80	28 00
Whale Oil.....	2,262 do	0 50	1,131 00
Fish and Clams used as Bait and Manure.....	125,094 do	1 00	125,094 00
Lobsters, fresh.....	5,000 lbs.,	0 05	250 00
Fish used for local consumption.....	5,171 $\frac{1}{2}$ barrels,	4 00	20,686 00
Total value of the products of the Fisheries in 1877.....			954,285 25
do do do 1876.....			621,168 50
Increase.....			\$333,116 75

MAGDALEN ISLANDS.

Persons who might be desirous of acquiring information regarding the geographical position, statistics, and resources of these Islands, can refer to my previous reports, especially to the last one, where these questions are treated at some length. I will, in the present instance, simply allude to the improvements of the past season.

I noticed with feelings of satisfaction the rapid growth of agriculture and education. Thanks to the generosity of the inhabitants who supplied gratuitously all that was necessary from the first piece of lumber to the last article of furniture, and who even gave provisions, House Harbour can now boast of a splendid convent. Most of the success of this great undertaking is due to the Rev. Mr. Hébert. Indefatigable and persevering as usual, he ceased not for one moment to prompt the generosity of his flock, who feel proud to notice the progress of education in their village, and have no longer any reason of being jealous of their neighbours on the south shore.

The *Curé* of Amherst Island could not possibly remain behind in this work of patriotism. He, too, is having built, at his own private expense, a magnificent college, which will be handed over to the parishioners when completed. Such deeds need no comments, and here, as elsewhere, our clergy shows how well it understands performing deeds of charity and philanthropy.

The *Cadastre* is nearing completion, and I need hardly say that the Islanders are unanimous in urging upon the local Government the advisability of redeeming the lands so soon as the surveys are completed. The tenure under which the farms are held must necessarily keep the insulars in a state of bondage. They cannot become proprietors, and it is of the utmost importance to their future prosperity, that the present feudal system should disappear as soon as possible.

The idea of uniting Magdalen Islands to the mainland by a system of telegraphic communications so satisfactorily brought before the public by my predecessor in office, Hon. P. Fortin, deserves the most favourable consideration at the hands of the Federal Government. Let us picture for one moment the state of isolation in which these people are placed, deprived as they are of any means of intercourse with the outside world during five long winter months. Besides this consideration, which in itself is of paramount importance, what services would not the building of this line confer upon commerce and navigation, &c. How many people would be made happy, and how many anxious hours and days would thus be removed at a comparatively insignificant cost!

In order not to repeat myself, I shall abstain from again alluding to the first settlements made on the Islands; the fishery pursuits carried on there; the changes brought by wars; the transfer of the Island to Admiral Coffin; the migrations from Prince Edward Island and Acadia; the formation of several colonies on the north coast out of the contingent of population of the Islands, and the return of the last colony which had migrated. These matters are alluded to at length in previous reports. I shall limit myself to stating that the people seem now to better appreciate the wealth of their Islands, to cleave more than ever to their native land, taking proper advantage of its productions and living in hopes that the Government will soon redeem their farms and place them on an equal footing with other inhabitants of the Dominion.

The past winter was a very short one at the Islands as well as everywhere else, and by the latter end of May, sowing-time was nearly over. Thanks to the successful fishing season of 1876 and a good harvest during the present year, the inhabitants did well enough during the winter, and I have every reason to believe that they will fare just as well during the approaching one; the yield of the fisheries being above the average.

I noticed with pleasure that the Municipal Councils had passed a regulation prohibiting the sale of intoxicating liquors. This is undoubtedly a most laudable measure and a timely move, which will not fail to produce excellent results. Herring fishing having failed last spring, the crews of foreign vessels had to remain idle. Riot

and debauchery would certainly have again reigned supreme had these men been able to find any liquor on the Islands.

Another favour which is anxiously expected at the hands of the Government is the appointment of a Stipendiary Magistrate. I took the liberty to express an opinion on this point in my last annual report; and if I again return to the subject it is because I consider it in a great measure necessary to the future tranquillity and prosperity of the Islands that such an appointment be made. This officer will need be well qualified for the position, and he should possess the requisite qualities of heart and mind necessary for the due administration of justice in these remote places.

The Government is undoubtedly entitled to sincere thanks for placing a steam vessel which carries the mails between the Islands and Pictou, but improvements are now so rapid; fishing establishments have so much increased in number since the passing of the Washington Treaty; the multiplication of affairs is so large; the progress of education and the erection of public buildings so important, that these reasons might induce the Government to make this service weekly.

Seal-hunting on the ice.

Of the varied and numerous harvests which the inhabitants of Magdalen Islands gather every year, seal-hunting on the ice is the first to attract their attention. Although the number of seals killed this season is larger than that of last year, the quantity of oil is smaller and the value realized proportionally less.

Schooners left towards the latter end of March, but being delayed by contrary winds, they could not reach the ice-fields before the end of May. At this period, seals are not quite so fat. Besides seal-hunting in schooners, these animals are also killed on the grounded fields of ice round the islands, and lately, net, as well as hook-fishing, has been tried. Neither of the latter methods appears to have been successful this spring. The seven schooners which fitted out for seal-hunting brought back 2,645 skins. This is much better than the catch of last year, when the same number of vessels succeeded in killing only 642 seals. The seals were all killed west of Magdalen Islands, quite close to Prince Edward Island.

**RETURN of the Number and Tonnage of Vessels, with Men and Boats, engaged
in the Seal Fishery at the Magdalen Islands, during the season of 1877.**

Name of Vessel.	Master.	Tons.	Men.	Boats.	Number of Seals taken.
Mary.....	Arseneau.....	34	5	4	100
Delaney	Vignault	43	10	4	275
Lion	Richard	41	12	4	600
Marie Anne	Terriault	45	10	4	220
Flash	Boudreau	47	10	4	360
Arctic	Arseneau	52	12	4	250
Cora May.....	Boudreau.....	42	10	4	240
Island Queen	Burke	78	10	4	600
Total, 8 Vessels.....		382	79	32	2,645

Number of Seals taken in 1877..... 2,645 seals
do do in 1876..... 642 do

Increase 2,003 do.

The success of seal-hunting on the floating ice round the Islands, depending much upon various causes, such as the winds, fair weather, &c., it must, at best, be considered as a most uncertain venture. Numerous herds were in sight in the channel between Grosse Isle and Bryon Island, but circumstances proved unfavourable, and only 1,514 seals were killed, against 2,159 in 1876. The most successful spots were east of Bryon Island, at Grosse Isle and Bird Rocks. The lighthouse keeper at the latter place succeeded in killing 250. Seal-fishing, with nets, was not quite so successful as last season; only 679 seals being killed, against 728 in 1876. The floating ice and winds interfered with this pursuit, and at some stations part of the sets, which are very expensive, were even carried away. Forty-one seals only were caught with bottom lines. As stated above, the total catch is larger than that of last year by 1,209 seals; but the quantity of oil is not so great, as may be seen by the following figures:

In 1876.....	17,730 gallons.
1877.....	14,749 "
Decrease.....	2,981

HERRING FISHERY.

The pursuit next in importance to cod and seal fishing, and that which engages the attention of the inhabitants of Magdalen Island, is the herring fishery. It is the second harvest which they gather before fishermen from other parts of Canada have begun their operations. This gives them an immense advantage, and when both these harvests are good, the Islanders are said to be safe for the winter.

This industry is very important. It supplies the inhabitants with an article of food, and brings quite a number of foreign fishing vessels every year to the Islands. No less than ninety-seven brigs, brigantines and schooners anchored in Amherst Harbour and Pleasant Bay this season; twenty-five of which belonged to the United States and sixty-five to ports in the Dominion. Had the weather been favourable, the Islanders would have made a good deal of money in fishing for these vessels, loading barques or selling them fish, but unfortunately the sea was so rough and the winds blew so heavily that nets could hardly be set or seines hauled up. All the inhabitants could do was to secure some bait for mackerel fishing and a small stock of fish for their winter supply. In addition to this ill success, a schooner which they had loaded with 600 barrels of herring, was lost in broad daylight on Entry Island, bound for Halifax. Most of the foreign vessels lost their voyage, and went to Newfoundland, Anticosti or Washeecootai. The total catch amounted to only 38,231 barrels, or 39,185 barrels less than last year, and may be divided as follows:

United States vessels.....	11,186 barrels.
Dominion ".....	21,365 "
Magdalen Islands	1,998 "
Boats.....	3,682 "
Total.....	38,231

**RETURN of the Number and Tonnage of Vessels, with the Boats, Men and Seines
engaged in the Spring Herring Fishery, at the Magdalen Islands, during the
Season of 1877.**

Name of Vessel.	Master.	From Whence.	Tons.	Men.	Boats.	Seines	Barrels of Fish taken
Lilly Dale.....	Hutchings	United States.....	56	6	2	.....	500
S. W. Perry.....	Look.....	do	83	5	1	1	800
Orient.....	Lee.....	do	93	5	3	.....	800
Nellie H.....	Mallock	do	78	7	3	1	500
Chas. C. Warren	Smith	do	108	6	2	.....	450
Hattie N. Gove.....	Bowie.....	do	347	8	3	.....	1,000
C. H. Macombes.....	Googins.....	do	120	5	2	.....	140
Josephine.....	Stanley	do	55	5	2	.....	200
Irwin Leslie.....	Coolidge.....	do	99	6	4	1	450
Carrie F. Butler.....	Parsons	do	68	6	2	.....	500
Bonanza.....	Allen	do	137	7	4	.....	350
Lant.....	Howard	do	53	7	2	.....	300
Greyhound.....	Hardy.....	do	66	4	2	1	200
Balance.....	Cousins.....	do	59	4	2	.....	200
Frances Ellen.....	Furgerson	do	98	5	2	.....	200
May Queen.....	Jellison	do	70	7	2	.....	200
E. H. King.....	Bunker	do	106	5	4	.....	450
H. S. Boynton.....	Leach.....	do	69	9	3	1	300
Robert T. Clark.....	Hutchinson	do	189	6	2	1	640
Lizzie Lee.....	Stubbs.....	do	92	12	4	.....	200
Carrie W.....	Feareboy	do	62	5	2	.....	500
Percy.....	Mitchell.....	do	81	7	2	.....	600
Red Beach.....	Dokerty.....	do	70	7	2	.....	400
Sea Spray.....	Holmes.....	do	52	7	2	.....	800
Anne Leonard.....	Raye	do	89	7	2	.....	500
City Queen.....	Baker	Halifax.....	53	7	2	.....	400
Stella.....	Shupe	do	50	6	.....	.....	160
Commodore.....	Venow	do	40	5	2	.....	200
Ellen May.....	Westhaven	do	60	7	3	1	600
Quickstep.....	Eisenhaur.....	do	40	7	2	.....	200
Riverdale.....	Hyson.....	do	48	5	3	.....	300
J. H. Hiltz.....	Nauss	do	55	8	4	1	350
Guerilla.....	Strum.....	do	67	9	4	1	600
Mashall S.....	Mann	do	179	7	1	.....	700
River Queen.....	Greser.....	do	51	7	2	.....	450
Smiling Water.....	Riteey	do	54	6	2	.....	350
Bismark.....	Conrod	do	54	7	2	.....	300
Champion.....	Mason	do	54	6	3	.....	450
Harvest Home.....	Zink.....	do	59	7	4	1	300
J. L. Vogler.....	Smith	do	52	7	2	.....	300
Armada.....	Smith	do	44	5	2	1	300
Mariner.....	Mossman	do	56	6	3	.....	350
Cordeha Vogler.....	Riteey	do	65	8	3	.....	450
Vantage.....	Corkum	do	56	7	3	1	350
British Tar.....	Evans	do	41	4	2	.....	500
Anna A. Teal.....	Riteey	do	59	7	3	.....	350
Fleety.....	Lohnes	do	95	8	3	.....	350
Sea Queen.....	McKay	do	41	3	2	.....	400
N. Noyes.....	Holmes	do	60	5	2	.....	.....
Sea Bird.....	Hyde	P. E. Island	20	2	1	.....	152
Onward.....	Squarebrigs	do	52	4	.....	.....	350
Confederate	McKay	do	48	5	1	.....	550
Gazelle	Kennedy	do	20	3	1	.....	150
Dove	Winsloe	do	25	3	1	.....	250
Lavinia Jane.....	Dickson	do	37	4	.....	.....	200
Rosanna.....	Boudroit	do	29	4	.....	.....	80
Monty R.....	McRae	do	16	2	.....	.....	180
E. Brown.....	Richards	do	24	3	.....	.....	100
Dauntless.....	Young	do	12	3	1	.....	.....

TURN of the Number and Tonnage of Vessels, with the Boats, Men and Seines, engaged in the Spring Herring Fishery, at the Magdalen Islands, during the Season of 1877.—*Continued.*

Name of Vessel.	Master.	From Whence.	Tons.	Men.	Boats.	Seines	Barrels of Fish taken.
April.	Batterbsey.	do	15	3	—	—	35
Equality.	Perry.	do	38	4	—	—	210
Ellington.	Hebb.	Lunenburg	88	9	4	1	850
Andy Speedwell.	Heckman.	do	53	7	3	—	500
Prince Consort.	Heisler.	do	38	3	3	—	400
W. Lith.	Heisler.	do	112	10	4	1	800
Green.	O'Quin.	Chéticamp.	12	4	2	—	100
Black Duck.	Chiasson.	do	13	4	2	—	80
Dayspring.	Galliger.	Guysboro'.	51	7	4	1	600
Victory.	Colford.	Port Hawkesbury.	37	7	3	1	288
Morning Light.	Walker.	Port Richmond.	38	6	3	1	350
William and Mary.	Murray.	do	35	5	3	1	450
H. Christie.	Steele.	do	80	9	3	1	800
Morning Star.	Landry.	Arichat.	21	5	2	—	200
Bound.	Wentzel.	Mahone Bay.	39	5	3	—	300
Alla.	Westhaver.	do	39	6	2	—	250
Active.	McFarlane.	Margaree.	31	4	1	—	No fish.
Sky.	Boudroit.	do	20	6	2	—	160
Dora Ann.	McFarlane.	do	12	3	—	—	60
Van.	Jamieson.	Canso.	46	7	2	1	475
Abel.	Myers.	do	44	6	2	—	300
Ydina.	Dolory.	Port Mulgrave.	62	7	2	—	650
Margaret Elizabeth.	Maguire.	do	44	7	2	—	450
E. Cove.	Keating.	do	54	7	2	—	350
Anne Otis.	Keating.	do	50	6	2	—	400
Croft.	Croft.	La Have.	44	6	3	1	300
E. Banks.	Gardner.	Yarmouth.	50	6	1	—	350
Mary A. Taylor.	Peters.	do	51	4	2	—	175
Connabel.	Peters.	do	45	4	3	—	120
Amacheater.	Le Blanc.	N. Sydney, C.B.	45	6	2	—	110
Aimless.	Holmes.	West Isles.	74	6	2	—	400
Silver Lake.	Bourgeois.	Magdalen Islands.	61	7	2	1	450
utter.	Cormier.	do	27	5	2	—	260
Typhoon.	Bouchard.	do	51	7	1	1	450
Colonel Ellsworth.	Doucette.	do	78	7	1	1	200
Madame Adèle.	Jomphe.	do	50	5	1	—	100
Greenock.	Terriault.	do	40	5	2	1	438
Mary Arseneau.	Arseneau.	do	34	4	1	1	100
Total, 97 Vessels.			5,838	566	204	26	34,549

RECAPITULATION.

Whence.	Vessels.	Tons.	Men.	Boats.	Seines.	Barrels of Fish taken.
United States.....	25	2,400	158	61	6	11,186
Nova Scotia	52	2,687	322	126	15	18,678
New Brunswick.....	1	74	6	2	....	400
Prince Edward Island..	12	336	40	5	....	2,287
Magdalen Islands.....	7	341	40	10	5	1,998
Total	97	5,838	566	204	26	34,549

Number of barrels taken in 1877..... 34,549 barrels

do do 1876..... 72,928 "

Decrease..... 38,389 "

SPRING MACKEREL FISHERY.

Mackerel fishing is divided into two periods ; the first takes place in June, and is called spring fishery ; the second begins in July and closes in October. It is known under the name of summer fishery.

A favourable weather is of absolute necessity for carrying on spring fishing ; strong winds from the outside drive the fish away, and entail besides, occasional loss of nets. Spring fishing began this year on the 2nd June, and closed on the 14th. Without being so successful as that of previous years, it, however, exceeded by 415 barrels, the catch of last year. Eleven vessels from Nova Scotia took 1,033 barrels, whilst twelve of them caught only 629 barrels in 1876. The Magdalen Islands boats were not so successful ; they took but 493 barrels, against 482 last season ; but it must be borne in mind that foreign vessels are more advantageously fitted out for this fishery, than the Islanders. The fish sold at \$8 last year, whilst prices went up to \$10 a barrel this season. The inhabitants of the Islands cannot all engage in this fishery ; it is restricted to those who reside on the shores of Pleasant Bay. The others follow cod fishing at that period of the year.

RETURN of the Number and Tonnage of Vessels, with the Boats, Men and Nets, employed in the Spring Mackerel Fishery, at the Magdalen Islands, during the season of 1877.

Name of Vessel.	Master.	From Whence.	Tons.	Men.	Boats.	Nets.	Barrels of fish taken.
Trial.....	Henley.....	Sheet Harbour.....	32	9	4	80	100
Jas. Henry.....	Boutillier.....	do.....	22	6	3	60	83
Emma.....	Hubley.....	do.....	25	7	3	50	50
P. Martin.....	Murphy.....	do.....	20	9	6	50	60
Manchester.....	LeBlanc.....	Port Mulgrave.....	45	7	1	75	35
Mary Ellen.....	Reeves.....	do.....	22	6	3	50	70
S. E. Cove.....	Keating.....	do.....	54	7	2	50	45
L. Elizabeth.....	Hawse.....	Halifax.....	48	13	5	110	150
Victory.....	Colford.....	Port Richmond.....	37	11	3	90	250
William and Mary.....	Murray.....	do.....	35	5	2	40	50
K. E. Stewart.....	Leslie.....	Spry Bay.....	45	12	5	98	140
Total, 11 Vessels.....	.....	.....	385	92	37	753	1,033

Number of barrels taken in 1877.....	.....	1,033 barrels
do.....	do.....	629 do
Increase.....	.....	404

 SUMMER MACKEREL FISHERY.

When mackerel have done spawning in the spring, they retire to deep water, but return again to the shores about the month of July. They are then in poor condition and very hungry; but having in a short time regained their flesh, they soon improve in size and quality, and from No. 3 become Nos. 1 and 2.

Summer mackerel fishing began this season about the 3rd July, and lasted until September; several foreign vessels, however, remained till the middle of October.

The fish kept very near inshore, especially at Pleasant Bay, Cape Allright and around Bryon's Island; and another fact worthy of note is, that bait used by our fishermen proved far more attractive than that employed by strangers. The latter could do nothing outside and were constantly among the Islanders trying their bait, but unsuccessfully.

Mackerel fishing, which has for a long time proved a source of wealth to American vessels, was altogether neglected amongst our own fishermen until lately. They now, however, appear anxious to engage in it more seriously than ever, and although the quantity caught by them this season is not quite so large as that of last year, some fishermen, especially those of House Harbour, Grindstone and Bryon Islands, made splendid hauls, and sold their fish as high as \$14 a barrel. Such remunerative prices cannot but incite them to greater preparations for the pursuit of this industry.

Mackerel summer fishing yielded 3,385 barrels, or 472 barrels less than last year; I am, however, under the impression that the rise in prices will fully compensate for the falling off in the catch. I was told that a load of 350 barrels shipped to Boston, sold at \$20 a barrel.

According to information received from the inhabitants, no more than thirty or forty United States schooners were noticed mackereling around the shores of the Islands, and out of that number very few are presumed to have caught more than 200 barrels.

COD FISHERY.

The same reasons which influenced the appearance of cod on the south coast also delayed its arrival at the Islands; but, unfortunately, when the fish arrived, it did not behave so well as on the south shore, where summer fishing was splendid. Bait failed here at a time when most wanted, and when the fall arrived and cod could have been caught in abundance, the weather kept so stormy that it was impossible to go out on the banks. The total catch amounts to only 1,190 quintals, against 1,642 in 1876. Eleven schooners belonging to the Islands repaired this season to the coast of Labrador. They met with an average success, taking 3,150 quintals of fish, against 1,240 in 1876.

The total catch of cod by Magdalen Islands fishermen amounts to 3,150 quintals divided among the schooners and 7,837 by boats; in all, 10,989 quintals, or 1,679 quintals more than in 1876. The increase in the quantity of oil produced is, however, much larger, being 10,705 gallons, against 4,631 in 1876.

Besides fifteen or twenty schooners from the United States which were engaged in this fishery around the Islands, several masters from Cape Breton and from Arichat, despatch every season quite a number of small schooners, ranging from twenty-five to sixty tons, which follow bank fishing. I boarded sixteen of these vessels, as follows:—

List of Schooners fishing for Cod, boarded in the neighbourhood of the Magdalen Islands, during the Season of 1877.

Name of Vessel.	Master.	From whence.	Tonnage.	Men.	Boats.	Quintals of Fish taken.
A Rogers.....	Hall.....	Lunenburg.....	56	10	3	30
Zedee	Hullgate	Yarmouth.....	61	10	3	28
Podasha	Johnson	do	50	12	4	36
Blue Bell.....	Fougère	Arichat	23	8	2	1
Janet	Jeon	do	30	8	5	1
Arcola	Poirier	do	37	10	6	3
Catherine	Fougère	do	30	6	4	1
Maria	Fougère	do	30	7	4	1
Philomène	Dugas.....	do	28	8	4	1
Neptune	Boudreault.....	do	25	6	3	1
Agility.....	Fougère.....	do	62	11	2	100
Emily	Fougère	do	35	10	3	75
Sunburn	Fougère	do	35	10	3	75
Rose Bud	Boudreault	do	50	8	3	60
Sophie ?.....	Bourke.....	do	19	6	2	1
Total, 15 vessels			571	130	51	414

These schooners were just beginning fishing when I boarded them. The catch of the smaller ones average from 200 to 300 quintals each trip, and they generally make three voyages during the season. The larger, ranging from 50 to 60 quintals, must have caught 1,000 quintals each during a voyage of four weeks. When cod fishing is over, they follow mackerel fishing. The crews fish on shares; half of the catch goes to the vessel, the outfitter supplying all that is required. The expense of fitting out amounts to about \$1,000, besides the cost of the vessel.

American schooners caught an average of at least 1,000 quintals per vessel, according to information received from the inhabitants on Bryon Island, where they often go ashore to purchase provisions.

Cod sold at \$4 a barrel on the spot, being one dollar cheaper than last year. Cod oil fetched fifty cents a gallon.

LOBSTER FISHERY.

Fishing for lobsters began here three years ago. It has always been on the increase since, and if the packers do not stop at the point they have reached, or rather curtail their operations, the race of lobsters will soon be extinguished. There were last season three canning establishments in full blast at the Islands; one at Grand Entry, under charge of Mr. Webb, where 327,900 lobsters were caught, yielding 131,184 pounds; another, under charge of Mr. Phail, preserved 11,520 pounds, the proceeds of the catch of 28,800 lobsters. Total 356,760 lobsters, 142,704 pounds. Mr. Webb has also an establishment at House Harbour, where 336,000 lobsters were caught, giving 134,000 pound cans. The catch for these three establishments amounts altogether to 692,760 lobsters, and produced 277,104 cans, or 153,104 pounds more than last year. They gave employment to 49 boats and 129 hands, besides fishermen. The expenditure at House Harbour alone amounted to \$220 a day. Fishing began in May, and closed in October. No fishing whatever was carried on during the close time.

This unprecedented catch must of necessity have had some effect on the species; so much so, that towards the end of the season, lobsters had barely the legal size of nine inches in length, and no more. Lobsters of ten or fourteen pounds were no longer caught as formerly, when these canning establishments first began their operations. It took about two lobsters and a half to fill up a pound can.

It cannot be denied that these canneries have proved a source of great advantage to the localities where they are situated, but this is, after all, only of a momentary nature, and if things are allowed to go on as they are now, experience is there to teach us that in two or three years lobster packing at Magdalen Islands will be a thing of the past. What will fishermen do then? In order to make this source of wealth last as long as possible, it is undoubtedly the Government's duty to protect the industry, but, in doing so, they must try and protect fishermen as well as packers.

Observations made in 1876, prove that female lobsters had mostly all cast their eggs by the end of September. This season, on the contrary, the number of females with eggs attached were as numerous in November as in July, a fact which would seem to agree with the dates I recommend as a close season.

Lobsters caught at Magdalen Islands are all preserved and shipped to England.

Exports of Fish and Oil from Magdalen Islands, showing whence same were exported, during the Season of 1877.

Ports.	Dry Codfish.	Pickled Codfish.	Herrings.	Mackerel.	Seal Skins.	Seal Oil.	Cod Oil.	Preserved Lobsters.	Preserved Mackerel.	Value.
	Qts.	Brls.	Brls.	Brls.	Number.	Galls.	Galls.	Lbs.	Lbs.	\$ cts.
FOREIGN.										
To United States.....	.....	.....	9,000	.....	.....	.....	.....	.....	.....	18,000 00
Sweden, via Newfoundland and Gano.....	.....	.....	6,172	.....	.....	.....	.....	.....	.....	12,344 00
COASTWISE.										
<i>Ports in Dominion.</i>										
To New Brunswick.....	.....	315	.....	186	78	78	78	.....	.....	153,706 00
Nova Scotia.....	9,085	20,802	2,620	4,151	9,280	3,780	277,104	960	960	33,024 00
Prince Edward Island.....	150	3,357	2,548	.....	.....	160	.....	.....	.....	15,762 00
Quebec.....	1,672	78	322	89	442	4,466	5,430	.....	.....	706 00
Total.....	10,907	78	39,968	5,257	4,779	13,824	9,370	277,104	960	233,542 00

RETURN OF FISHING STATIONS, kinds of Vessels, number of

MAGDALEN

No.	NAME OF PLACE.	Vessels.			Fishing Boats.		Flat Boats.		No. of Fishermen.	No. of Shoremen.	Salmon Nets.		Cod Seines.		
		No.	Tons.	Value.	No.	Value.	No.	Value.			No.	Yards.	Value.	No.	Yards.	Value.
<i>Amherst Island.</i>															
1	Pleasant Bay and Amherst Harbour.....	103	6033	211155	626	268	9734	4	24	701	100	..	..	..	..
2	Basin .....	.....	.....	.....	24	960	4	24	48	30	..	..	..	..	..
3	L'Anse au Moulin.....	.....	.....	.....	6	240	4	24	14	8	..	..	..	..	..
4	L'Anse à la Cabane.....	.....	.....	.....	37	1480	6	36	94	80	..	..	..	..	..
5	Etang du Cap .....	.....	.....	.....	10	400	2	12	22	10	..	..	..	..	..
<i>Grindstone Island.</i>															
6	Etang du Nord.....	.....	.....	.....	73	3650	6	36	190	150	..	..	..	..	..
7	Hospital.....	.....	.....	.....	12	600	2	12	30	10	..	..	..	..	..
8	Cape Mull.....	.....	.....	.....	8	400	2	12	21	10	..	..	..	..	..
<i>Allright Island.</i>															
9	House Harbour.....	11	477	18000	54	43	1720	26	156	145	120	..	..	..	..
10	L'Anse à Elie .....	.....	.....	.....	.....	10	400	4	48	27	10	..	..	..	..
11	South Beach.....	.....	.....	.....	42	1680	6	36	123	10	..	..	..	..	..
12	Pointe Basse.....	.....	.....	.....	2	80	1	6	6	2	..	..	..	..	..
13	Grand Entry an l Grosse Isle.....	.....	.....	.....	14	560	6	36	29	37	..	..	..	..	..
14	Bryon Island.....	.....	.....	.....	16	640	4	24	38	20	..	..	..	..	..
15	Entry Island .....	.....	.....	.....	9	360	2	12	12	..	..	..	..	..	..
	Total.....	114	6510	229155	680	574	22904	79	498	1500	597	..	..	..	..

Men, kinds of Nets used, kinds of Fish and Fish Oils, &c., &c.

ISLANDS DIVISION.

NETS AND SEINES.

Herring Seines.			Herring Nets.			Mackerel Seines.			Mackerel Nets.			Capelin Seines.			Launce Seines.			Seal Nets.			Brush Fisheries		
No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	No.	Value.	
24	5970	9075	11	440	110				935	46750	11220	1	120	120				.81	480	240			
			35	1400	350				68	3400	816							10	300	150			
			15	600	150				78	3900	936												
			86	3440	860				80	4000	960							10	350	150			
			21	810	210				6	3000	72												
									55	2750	660							52	2080	1040			
																		8	880	440			
																		30	1200	600			
2	600	700										3	300	600				6	600	300			
			2	80	20				40	200	480							26	2700	1300			
			33	1320	330				3	150	36							19	1900	950			
			1	40	10																		
																		50	3000	1500			
						1	40	10										12	1200	600			
						1	40	10		122	6100	1464											
26	6570	9775	206	8210	2060				1387	70250	16644	5	420	720				231	14690	7270			

RETURN OF FISHING STATIONS, kinds of Vessels, number of Men

MAGDALEN

NAME OF PLACE.	Salmon, Cured, barrels.	Salmon, Fresh, in ice, lbs.	Salmon, in cans, lbs.	Salmon, Smoked, boxes.	Summer Fishing.	Fall Fishing.	Haddock, quintals.	Ling, quintals.	Halibut, barrels.	Herring, barrels.	Herring, Smoked, boxes.	Mackerel, barrels.	Trout, barrels.	Sardines, barrels.	Eels, barrels.
<i>Amherst Island.</i>															
Pleasant Bay and Amherst Harbour	455	7	.....	.....	.....	.....	35205	.....	136	.....	1756	.....	.....	.....	.....
Basin	935	23	.....	.....	.....	.....	.....	.....	89	.....	125	.....	.....	.....	.....
L'Anse au Moulin	290	7	.....	.....	.....	.....	.....	.....	383	.....	94	.....	.....	.....	.....
L'Anse à la Cabane	1380	120	.....	.....	.....	.....	.....	.....	100	.....	86	.....	.....	.....	.....
Etang du Cap	295	33	.....	.....	.....	.....	.....	.....	.....	.....	70	.....	.....	.....	.....
<i>Grindstone Island.</i>															
Etang du Nord	4052	.....	.....	.....	.....	.....	760	.....	120	.....	460	.....	.....	.....	.....
Hospital	90	.....	.....	.....	.....	.....	60	.....	60	.....	96	.....	.....	.....	.....
Cape Mull	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	55	.....	.....	.....	.....
<i>Allright Island.</i>															
House Harbour	2740	.....	.....	.....	.....	.....	724	.....	84	.....	148	.....	.....	.....	.....
L'Anse à Elie	32	.....	.....	.....	.....	.....	288	.....	24	.....	177	.....	.....	.....	.....
South Beach	195	.....	.....	.....	.....	.....	24	.....	24	.....	1454	.....	.....	.....	.....
Pointe Basse .....	.....	.....	.....	.....	.....	.....	72	.....	92	.....	15	.....	.....	.....	.....
<i>Grand Entry and Grosse Isle.</i>															
Bryon Island	30	.....	.....	.....	.....	.....	94	.....	94	.....	19	.....	.....	.....	.....
Entry Island	430	.....	.....	.....	.....	.....	38231	.....	38231	.....	171	.....	.....	.....	.....
Tota	50	.....	190	.....	.....	.....	4912	.....	4912	.....	186	.....	.....	.....	.....

Kinds of Nets used, kinds of Fish and Fish Oils, &c.—Continued.

ISLANDS DIVISION.

RECAPITULATION.

YIELD and Value of the different Fisheries of the Magdalen Islands Division in 1877.

Kinds of Fish.	Quantities.	Prices.	Value.
		\$ cts.	\$ cts.
Summer Cod fishing	10,989 quintals, at...	5 00	54,945 00
Autumn do	190 do	5 00	950 00
Herring.....	38,231 barrels	5 00	191,155 00
Mackerel	4,912 do	10 00	49,120 00
do preserved in cans	960 lbs.	0 15	144 00
Seal Skins	4,838 pieces	1 25	6,047 50
Seal Oil.....	15,799 gallons	0 50	7,899 50
Cod Oil.....	10,705 do	0 50	5,352 50
Lobsters, in cans	277,104 lbs.	0 15	41,565 60
Fish and Clams used as Bait and Manure.....	1,923 barrels	1 00	1,923 00
Fish used for local consumption	1,767 do	4 00	7,068 00
Total value of the product of the Fisheries for 1877.....			366,170 10
do do 1876.....			450,865 75
Decrease.....			84,695 65

ANTICOSTI ISLAND.

The Island of Anticosti cannot, strictly speaking, be called an agricultural country: the largest portion of its soil offers, however, great inducements for growing vegetables. Although the company formed in 1872 for the purpose of settling this Island and developing its resources did not prove a successs, the idea was a good one, and may sooner or later be realized. We owe to this company the nucleus of colonization which increases every year. The population, which numbered only 102 persons in 1871, soon went up to 250, and the addition of sixteen families from Newfoundland, has now increased it to 400.

Among the families which first settled at English Bay, Fox Bay and Strawberry Cove, several may be considered to be in fair circumstances. Some settlements even had an abundance of winter supplies, and early in the spring a cargo of potatoes was sent from English Bay to Quebec. The crop of potatoes was very abundant, yielding forty or forty-five bushels to one. The fields had a most beautiful aspect. At Fox Bay, which has been settled for some two or three years past, everything would have gone well, had not sixteen families arrived all at once during the month of August. Being unprovided with provisions for the winter, and the time of fishing being nearly over, these people would have fared badly, had not the local government kindly sent seventy-five barrels of flour, which will enable them to wait until next spring. They will, I hope, be more careful another season and pay better attention to their own wants.

There are now about one hundred and forty families on the Island; most of them being located at English Bay, Strawberry Cove, Fox Bay, and at the south-west and south points. A large increase is yearly experienced during the summer by the arrival of fishermen from Douglastown and Montmagny, who go there for cod-fishing. This floating population is said to have amounted this season to 391 people. The most frequented fishing localities are at Fox Bay, Capelin Bay, Cape Observation and the north-east part of the Island. The crop of vegetables was so abundant that the inhabitants are under no apprehensions for next winter, but the price of fish being lower than in 1876, they will be unable to save as much money.

In order to protect the provision depots, which are located at various places on the Island for the purpose of rendering assistance to wrecked vessels, the government considered it necessary to punish those who had been guilty of pillaging them in 1875. This long needed act of justice has already borne its fruits, and I was happy to learn, when at the Island last spring, that law and property had been respected and

that the parties who spent part of the winter in jail as a punishment for their past misdeeds, went steadily to work after, and have caught from eighty to ninety quintals of cod, and stored from 200 to 250 bushels of potatoes each.

Provisions were scarce and costly during the beginning of the season, especially at English Bay; but later in the fall, a schooner from Quebec, loaded with provisions, was wrecked there. The cargo was saved and subsequently disposed of cheap. There were enough supplies to meet all the possible wants of the residents. During the month of November, the "Northumbria" a vessel loaded with flour and wheat, was also wrecked on the eastern point of Anticosti. Most of the cargo was saved; this will also add to the winter stock of provisions.

COD FISHERY.

Early in the spring, cod was most abundant everywhere around the Island, when all of a sudden fish and bait disappeared. This unfortunate occurrence is said to be due to the same reasons which influenced their disappearance in other localities, during nearly the whole summer. The fish returned only towards the fall, but it being very difficult to carry on fishing in these localities after 16th September, the boats hardly caught more than four or five quintals whenever enabled to go out. The catch amounted to 8,256 quintals, which gives an average of from 45 to 50 quintals, each boat. The catch in 1876 amounted to 5,663 with thirty boats less. Cod sold from \$3.30 to \$3.50. Last year the prices went up as high as \$4.50.

HERRING, HALIBUT AND MACKEREL FISHERIES.

The locality where herring strikes in greater abundance every spring is Fox Bay, on the north-east side of Anticosti. Vessels from the United States and the Maritime Provinces usually repair to Fox Bay for their cargoes, no less than twenty-eight schooners being there this spring. The list of these vessels was accidentally lost. I am, however, aware that their catch amounted to 13,500 barrels, which added to 1,914 barrels caught at other parts on that coast, during the remainder of the season, gives a total of 15,414 barrels, against 4,410 last year. The advantages of this abundance was particularly felt by foreign vessels; the catch by residents being smaller than usual, owing to stormy weather, which prevented their going out or setting their nets.

Complaints having been made that bait for cod-fishing was gradually getting scarce in Fox Bay, I thought that the practice carried on by foreign vessels of throwing their offals on the grounds, might have something to do with the matter, and I instructed the local fishery guardian to be on the spot during the whole fishing season next spring, so as to have the law strictly carried out. I shall, besides, do myself all I can to be there in time next season and see that these orders are enforced.

The halibut fishing grounds around the Island of Anticosti, are known to be unsurpassed. Although greatly injured by excessive fishings, three American schooners secured their cargoes near Cape Observation, and the settlers who only follow this pursuit accidentally caught 164 barrels, being seventy barrels more than last year.

About twenty barrels of mackerel were also caught in herring nets; the fish however, appeared to be more abundant than usual.

SALMON FISHERY.

The catch of salmon was somewhat better than that of last year, without being very remunerative; the total yield being 79 barrels, against 72 in 1876.

SEAL-HUNTING.

Seal-hunting was comparatively good. Two men who employ their time at shooting seals, killed 132, which being added to 70 caught in nets gives a total of 202, against 145 in 1876. The quantity of oil produced amounted to 440 gallons, against 31s last year.

When at Fox Bay, I heard it rumoured that the settlers intended building a schooner for the purpose of going out seal-hunting in the Gulf. I encouraged this idea as much as possible, Fox Bay being one of the most advantageous harbours for fitting out such expeditions in the spring.

The total value of the fisheries of the Island during the present season amount to \$133,352, against in 1876 \$56,585; an increase of \$78,766.

RETURN OF FISHING STATIONS, kind of Vessels, Number of Men

ISLAND OF ANTI

NAME OF PLACE.	Vessels.			Fishing Boats.	Flat Boats.	No. of Fishermen.		No. of Shoremen.		Salmon Nets.		Cod Seines.
	No.	Tons.	Value.	No.	Value.	No.	Value.	No.	Yards.	No.	Value.	Yards.
English Bay.....	47	1880	50	500	94	30	.....	.....	.....	.....	.....	.....
Strawberry Cove.....	2	80	7	70	11	.....	.....	.....	.....	.....	.....	.....
Little River.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Becscie River.....	1	45	1	12	2	.....	.....	1	16	4	.....	.....
Otter River.....	.....	.....	.....	1	10	1	.....	1	16	6	.....	.....
Jupiter River.....	1	50	1	10	2	.....	.....	2	40	20	.....	.....
South-West Point.....	12	480	12	120	24	6	.....	.....	.....	.....	.....	.....
Chaloupe Creek.....	.....	.....	.....	1	12	2	.....	2	120	30	.....	.....
Dauphine River.....	.....	.....	.....	1	8	1	.....	1	180	40	.....	.....
Bay River.....	.....	.....	.....	1	8	1	.....	2	124	30	.....	.....
Belle River.....	.....	.....	.....	1	10	1	.....	1	90	20	.....	.....
Seal River.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fox Bay and River.....	24	1500	20000	122	472256	44	444	145	34	1	30	10
Deep Bay.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mozerolle River.....	.....	10	400	9	90	16	6	1	100	25	.....	.....
East Bay.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Observation.....	.....	8	320	4	40	16	6	.....	.....	.....	.....	.....
Capelin Bay.....	.....	9	280	4	40	18	7	.....	.....	.....	.....	.....
Cow Bay.....	.....	3	120	2	20	6	2	.....	.....	.....	.....	.....
Potatoes Cove.....	.....	3	120	2	20	6	2	.....	.....	.....	.....	.....
Cape Cove.....	.....	1	40	1	10	2	1	.....	.....	.....	.....	.....
Salmon River.....	.....	1	40	2	20	3	1	2	320	50	.....	.....
McDonald's Cove.....	.....	33	1332	29	290	65	22	3	100	45	.....	.....
Little Indian Cove.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oro Point.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	24	1500	20000	122	1787443	173	1743	416	117	17	1136	280

kinds of Nets used, kind of Fish, and Fish Oils, &c.

COSTI DIVISION.

NETS AND SEINES.

Herring Seines.			Herring Nets			Mackerel Seines.			Mackerel Nets.			Capelin Seines.			Launce Seines.			Seal Nets.			Brush Fisheries			
No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	No.	Yards.	Value.	
	\$			\$			\$			\$			\$			\$			\$			\$		
90	3960	1800	8	170	160																			
24	480	490																						
74	7947	3156				2	88	32																
20	800	440										1	60	60										
10	500	200										1	50	60										
9	360	180										2	120	60										
7	280	140										1	60	30										
7	280	140										1	60	30										
1	50	20										1	50	60										
4	200	104				3	150	45				1	60	30										
63	2420	1220										3	90	150										
317	17447	8052				5	238	77	21	1010	905							9	332	58				

RETURN OF FISHING STATIONS, kind of Vessels, Number of

ISLAND OF ANTICOSTI

NAME OF PLACE.	Salmon, Cured, barrels.		Salmon, Fresh, in ice.		Salmon, in cans.		Salmon, Smoked.		SUMMER FISHING.	Cod, quintals.	FALL FISHING.	Haddock, quintals.	Ling, quintals.	Halibut, barrels.	Herring, barrels.	Herring, Smoked, boxes.	Herring, barrels.
English Bay.....										2,150	150				60	330	
Strawberry Cove.....										350	70				9	30	
Little River.....																	
Becscie River.....	2																
Otter River	1½																
Jupiter River	11																
South-West Point.....								363		50					10	150	
Chaloupe Creek.....	26																
Daphne River.....	10																
Bay River	5½																
Belle River.....	1																
Seal River.....																	
Fox Bay and River.....	2½							1,176							5	14,539	
Deep Bay.....																	
Manzerolle River.....	1							650		104					3	228	
East Bay.....																	
Cape Observation								440		97					1	37	
Capelin Bay.....								250							6	27	
Cow Bay.....								180							6	70	
Potatoes Cove.....								180							6	70	
Cape Cove.....								40		10					3	21	
Salmon River.....	11							40		8						7	
McDonald's Cove	4							1,935		60					55	705	
Little Indian Cove																	
Oro Point																	
Total.....	75½							7,754		549					164	16,214	

Men, kinds of Nets used, kind of Fish, and Fish Oil, &c., &c.

DIVISION.—*Continued.*

		Mackerel, barrels.		Trout, barrels.		Sardines, barrels.		Eels, barrels.		Tunny, barrels.		God Tongues and Sounds, barrels.		SEALS, WHALES AND PORPOISES.		OILS.		FISH AND CLAMS USED AS BAIT AND MANURE.		Fish used for Local Consumption, barrels.		
4	3	2	1	12	8	8	1	11	1	132	132	1	7	132	10	280	2,840	1,400	300	500	2	50
6	5	4	3	3	2	1	1	11	1	60	60	1	1	60	10	25	170	170	20	200	200	10
15	1	1	1	12	8	8	1	11	1	135	135	1	1	135	1	1	1	1	1	1	1	1
1	1	1	1	3	2	1	1	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	12	146	146	1	360	1	146	356	1	8	356	1	811	2,840	4,935	1,447	2,187	2,187	132
18	14	14	14	2	35	356	356	1	1	35	356	1	1	35	1	811	2,840	4,935	1,447	2,187	2,187	469

RECAPITULATION.

YIELD and Value of the different Fisheries of the Island of Anticosti Division
in 1877.

Kinds of Fish.	Quantities.	Price.	Value.
		\$ cts.	\$ cts.
Summer Cod fishing.....	7,754 quintals, at.....	5 00	38,770 00
Autumn do	549 do	5 00	2,745 00
Herring.....	16,214 barrels.....	5 00	81,070 00
Halibut.....	164 do	6 00	984 00
Mackerel.....	18 do	10 00	180 00
Salmon, pickled.....	75 $\frac{1}{2}$ do	12 00	906 00
Trout.....	14 do	8 00	112 00
Eels.....	2 do	10 00	20 00
Seal Skins.....	356 pieces.....	1 25	445 00
Cod Tongues and Sounds.....	35 barrels.....	9 00	315 00
Seal Oil.....	811 gallons.....	0 50	405 50
Whale Oil.....	2,840 do	0 50	1,420 00
Cod Oil.....	4,935 do	0 50	2,467 50
Fish and Clams used as Bait and Manure.....	3,636 do	1 00	3,636 00
Fish used for local consumption.....	469 do	4 00	1,876 00
Total value of the products of the Fisheries in 1877.....			\$135,352 00
do do do 1876.....			56,585 75
Increase.....			\$78,766 25

GENERAL RECAPITULATION.

NETS AND SEINES.

RETURN OF FISHING STATIONS, kinds of Vessels, number of Men, kind of Nets used, kinds of Fish and Fish Oils, &c.—Continued.

GENERAL RECAPITULATION.—Continued.

Divisions,	SEALS, WHALES AND PORPOISES.		OILS.		FISH AND CLAMS USED AS BAIT AND MANURE.		LOBSTERS, PRESERVED, IN CANS, LBS.		FISH USED FOR LOCAL CONSUMPTION, LBS.		MACKEREL, PRESERVED, IN CANS, LBS.		COD TONGUES & SOUNDS			
	No. of Seals.	No. of Seal-skins.	No. of Whales.	No. of Porpoises.	No. of Porpoise skins.	Seal Oil, galls.	Whale Oil, galls.	Porpoise Oil, galls.	Cod Oil, galls.	Herring, barrels.	Smelt, barrels.	Cod Roes, brls.	Herring, barrels.	Mackerel, barrels.	Tunny, barrels.	Cod Tongues & Sounds
County of Gaspé.....	5	15	1	1	1	60	8634	69	81203	9636	22102	805	1448	919	73060	1396
County of Bonaventure.....	.....	.....	.....	.....	.....	.....	.....	.....	8171	1783	8121	.....	5735	391	100555	2751
Labrador.....	1	11	11	41800	2262	35	119861	132	121569	.....	11	3382	5000	5171	.....
Magdalen Islands.....	7898	4838	1	15799	.....	10705	1625	.....	4935	1447	2187	2	298	271104	1767	960
Anticosti Island.....	356	356	1	811	2840	.....	.....	.....	.....	.....	.....	2	.....	469	469	.....
Total	13097	17	12	58470	13716	95	224875	14623	163979	805	7196	4993	455669	115542	960	.....

EXTRACT

FROM THE LOG-BOOK OF THE FISHERIES PROTECTION STEAMER "LADY HEAD" FOR THE SEASON OF 1877.

- May 15.—Took charge of S.S. "Lady Head" at the Government Wharf, 10.10 a.m. Left the Government Wharf, 10.20 a.m. Moored at L'Islet wharf, 3 p.m.
- May 16.—Left L'Islet, 10 a.m. Anchored at Brandy Pots, 5 p.m.
- May 17.—Left Brandy Pots, 1 p.m. Anchored at Green Island, 2.50 p.m.
- May 19.—Left Green Island, 8.30 a.m. Anchored in Trinity Bay, 3 p.m.
- May 20.—Left Trinity Bay, 3 a.m.
- May 21.—Anchored at West Point, Magdalen Islands, 10.30 a.m. Left West Point, Magdalen Islands, 1 p.m. Anchored at House Harbour, 4 p.m.
- May 22.—Left House Harbour, 1 p.m. Anchored at Amherst, 2 p.m.
- May 27.—Left Amherst, 4 a.m. Anchored at West Point, Magdalen Islands, 7.20 a.m.
- May 28.—Left West Point, Magdalen Islands, 7 a.m. Anchored at Gaspé Basin, 10.20 p.m.
- May 30.—Left Gaspé Basin, 10 a.m. Anchored at Percé, 1.20 p.m.
- May 31.—Left Percé, 4 a.m. Anchored at Grand River, 5.45 a.m.
- June 1.—Left Grand River, 9.45 a.m. Anchored at Pabos, 10.20 a.m.
- June 2.—Left Pabos, 9.30 a.m. Anchored at Newport, 10 a.m. Left Newport, 3.15 p.m. Anchored at Port Daniel, 4.25 p.m.
- June 4.—Left Port Daniel, 12 p.m. Anchored at Paspebiac, 2 p.m.
- June 5.—Left Paspebiac, 8.25 a.m. Anchored at Cascapedia, 12.30 p.m.
- June 6.—Left Cascapedia, 8 a.m. Anchored at Carleton, 10.40 a.m.
- June 7.—Left Carleton, 3.50 p.m. Anchored at Campbellton, 6.40 a.m. Left Campbellton, 5.15 p.m. Anchored at Carleton, 10.20 p.m.
- June 8.—Left Carleton, 8.30 a.m. Anchored at Capelin River, 11.45 a.m. Left Capelin River, 2.40 p.m. Anchored at Bonaventure, 3.40 p.m.
- June 9.—Left Bonaventure, 8.40 a.m. Anchored at Paspebiac, 10.25 a.m. Left Paspebiac, 1.10 p.m. Anchored at Newport, 4.10 p.m.
- June 10.—Left Newport, 7.30 a.m. Anchored at Pabos, 8.25 a.m.
- June 11.—Left Pabos, 11.45 a.m. Anchored at Newport, 12.35 p.m. Left Newport, 1.40 p.m. Anchored at Gaspé Basin, 7 p.m.
- June 15.—Left Gaspé Basin, 8 p.m.
- June 16.—Anchored at Pabos, 2 a.m. Left Pabos, 10.10 a.m. Anchored at Gaspé Basin, 3 p.m.
- June 18.—Left Gaspé Basin, 6.30 p.m. Anchored at Pabos, 12 p.m.
- June 19.—Left Pabos, 6 a.m. Anchored at House Harbour, Magdalen Islands, 9 p.m.
- June 21.—Left House Harbour, 1 p.m. Anchored at Amherst, 2 p.m.
- June 22.—Left Amherst, 4.10 p.m. Anchored at Grindstone Point, 5.10 p.m.
- June 23.—Left Grindstone Point, 9 a.m. Anchored at Old Harry Head, Magdalen Islands, 11.45 a.m. Left Old Harry Head, 4.30 p.m.
- June 24.—Anchored at West Point, Anticosti, 5 a.m. Left West Point, Anticosti, 1 p.m. Anchored at Kegashua, 8 p.m.
- June 25.—Left Kegashua, 3 p.m. Anchored at Natashquan River, 6.20 p.m. Left Natashquan River, 11.10 p.m.
- June 26.—Anchored at Esquimaux Point, 6.30 a.m. Left Esquimaux Point, 9 a.m. Anchored at St. John River, 12.30 p.m. Left St. John River, 3 p.m. Anchored at Mingan, 5.10 p.m.
- June 28.—Left Mingan, 3.10 p.m.
- June 29.—Anchored at Moisie River, 3.30 p.m. Left Moisie River, 11.50 a.m. Anchored at Seven Islands, 1.10 p.m. Left Seven Islands, 2.20 p.m. Anchored at Egg Island, 7.20 a.m.

- June 30.—Left Egg Island, 7.25 a.m. Anchored in Trinity Bay, 9.15 a.m. Left Trinity Bay, 4.45 p.m. Anchored at Egg Island, 6 p.m.
- July 3.—Left Egg Island, 4.15 a.m. Anchored in Trinity Bay, 5.40 a.m. Left Trinity Bay, 6.15 a.m. Anchored at Gaspé Basin, 9.30 a.m.
- July 5.—Left Gaspé Basin, 9 a.m. Anchored at S. W. Point, 3.15 p.m. Left S. W. Point, 8.30 p.m.
- July 6.—Anchored at Gaspé Basin, 2.03 a.m.
- July 7.—Left Gaspé Basin, 11 a.m.
- July 8.—Anchored at Richibucto, 1.30 a.m. Left Richibucto, 10 a.m. Anchored at Pictou Harbour, 10 p.m.
- July 9.—Left Pictou Harbour, 11 a.m.
- July 10.—Anchored at Pictou Mines, 12 p.m. Left Pictou Mines, 7 a.m. Anchored off Pictou, 8 a.m.
- July 17.—Left Pictou, 10:30 p.m.
- July 18.—Anchored at Amherst, Magdalen Islands, 11 a.m.
- July 19.—Left Amherst, Magdalen Islands, 12.0 a.m. Anchored at Bryon Island, 6 p.m.
- July 20.—Left Bryon Island, 12.20 a.m. Anchored at East Point, Anticosti, 2 p.m.
- July 22.—Left East Point, Anticosti, 8.30 a.m. Anchored at Cormorant Point, 9.30 a.m. Left Cormorant Point, 1.25 p.m.
- July 23.—Anchored at Port Daniel, 4.45 a.m.
- July 25.—Left Port Daniel, 4 a.m. Anchored at Newport, 5.30 a.m. Left Newport, 1.20 p.m. Anchored at Grand River, 3 p.m. Left Grand River, 7 p.m. Anchored at Percé, 8.40 p.m.
- July 26.—Left Percé, 7.20 p.m.
- July 27.—Anchored off Magdalen River, 2.30 a.m. Left Magdalen River, 12 p.m.
- July 28.—Anchored at Fox River, 4 a.m. Left Fox River, 7.30 a.m. Anchored at Anse à la Louise, 8 a.m. Left Anse à la Louise, 8.40 a.m. Anchored at Cape Rosier, 9.15 a.m. Left Cape Rosier 11.11 a.m. Anchored at Cape Rosier Lighthouse, 11.20 a.m. Left Cape Rosier Lighthouse, 3 p.m. Anchored off Cape Gaspé, 4 p.m.
- July 29.—Left Cape Gaspé, 6 a.m. Anchored at Douglastown, 7 a.m. Left Douglastown, 4.20 p.m. Anchored at Point Penouille, 5 p.m.
- July 30.—Left Point Penouille, 7.30 a.m. Anchored at Sandy Beach, 8 a.m.
- July 31.—Left Sandy Beach, 6 a.m. Anchored at Fox River, 9 a.m. Left Fox River, 1.15 p.m. Anchored at Anse au Gris Fonds, 2.20 p.m.
- August 1.—Left Anse au Gris Fonds, 8 a.m. Anchored at Chieu Blanc, 11:15 a.m. Left Chieu Blanc, 2 p.m. Anchored at Haldimands Bluff, Gaspé Bay, 3 p.m.
- August 2.—Left Haldimands Bluff, Gaspé Bay, 2 p.m. Anchored in Gaspé Basin, 7 a.m.
- August 3.—Left Gaspé Basin, 2 p.m. Anchored at Percé, 5.15 p.m.
- August 4.—Left Percé, 4.45 a.m. Anchored at Newport, 8 a.m. Left Newport, 9.30 a.m.
- August 5.—Anchored at Cape Tormentine, 1 a.m. Left Cape Tormentine, 9.40 a.m. Anchored at Pictou Harbour, 5.40 p.m.
- August 7.—Left Pictou Harbour, 4.50 p.m. Moored to the Mines Wharf, 2.20 p.m.
- August 11.—Left the Mines Wharf, 3.15 p.m. Anchored off Pictou, 3.45 p.m. Left Pictou, 6.40 p.m.
- August 12.—Anchored at Port Daniel, 4.50 p.m. Left Port Daniel, 5.40 p.m. Anchored at Newport, 6.40 p.m. Left Newport, 7.15 p.m. Brought to at Percé, 8.10 p.m. Left Percé, 10.45 p.m.
- August 13.—Anchored at Point Penouille, 12 a.m. Left Point Penouille, 5 a.m. Brought to at Sandy Beach, 5.20 a.m. Left Sandy Beach, 5.40 a.m. Anchored at Gaspé Basin, 5.57 a.m. Left Gaspé Basin, 3 p.m. Anchored at Percé, 6 p.m.

August 14.—Left Percé, 9.25 a.m. Anchored at Barachois, 10 a.m. Left Barachois, 1.20 p.m. Anchored at Percé, 3.05 p.m. Left Percé, 6 p.m. Anchored at Gaspé Basin, 10 p.m.

August 18.—Left Gaspé Basin, 12 p.m.; anchored at Anse an Gris Fonds, 3.40 p.m. Left Anse an Gris Fonds, 5.30 p.m. Anchored at Chloridorme, 8.45 p.m.

August 19.—Left Chloridorme, 10.05 a.m. Anchored at Grand Valley, 11.40 a.m. Left Grand Valley, 2 p.m. Anchored at Magdalen River, 2.50 p.m. Left Magdalen River, 5 p.m. Anchored at Mont Louis, 7.10 p.m.

August 20.—Left Mont Louis, 1.40 a.m. Anchored at St. Anne des Monts, 6.11 a.m. Left St. Anne des Monts, 1.40 a.m. Anchored in Trinity Bay, 5.45 p.m. Left Trinity Bay, 11.45 p.m.

August 21.—Anchored at Moisie River, 7.40 a.m. Left Moisie River, 9.30 a.m. Brought to at Sheldrake River, 2 p.m. Left Sheldrake River, 4.30 p.m. Anchored at St. John River, 6.40 p.m.

August 22.—Left St. John River, 11.10 a.m. Anchored in English Bay, Anticosti, 2 p.m.

August 23.—Left English Bay, 11.25 a.m. Anchored at Gaspé Basin, 8.21 p.m.

August 25.—Left Gaspé Basin, 7.40 a.m. Anchored at Douglastown, 8.30 a.m.

August 27.—Left Douglastown, 7.20 a.m. Anchored at Percé, 9.30 a.m. Left Percé, 1.10 p.m. Anchored at Pabos, 3.40 p.m.

August 28.—Left Pabos, 10.05 a.m. Anchored at Newport, 11.10 a.m. Left Newport, 12.40 p.m. Anchored at Port Daniel, 2.15 p.m.

August 29.—Left Port Daniel, 6.45 p.m. Anchored inside of Port Daniel, 7.30 p.m. Left Port Daniel, 1.50 a.m. Anchored at Capelin River, 4.20 p.m. Left Capelin River, 5.25 p.m. Anchored at New Richmond, 7. 0 p.m.

August 30.—Left New Richmond, 2 p.m. Anchored at Carleton, 3.40 p.m.

August 31.—Left Carleton, 6.40 p.m. Anchored at Charlot River, 10.40 p.m.

September 3.—Left Charlot River, 10 p.m. Anchored at Carleton, 7.45 p.m.

September 4.—Left Carleton, 4.15 a.m. Anchored in Port Daniel, 9.30 a.m. Left Port Daniel, 7.30 p.m.

September 5.—Anchored at Gaspé Basin, 3 a.m. Moored at Eden's Wharf, 6 a.m. Left Eden's Wharf, 6 p.m.

September 6.—Left Gaspé Basin, 2 p.m.

September 7.—Anchored at Whale Head, Little Meccatina, 3.20 p.m. Left Whale Head, Little Meccatina, 5 p.m. Anchored at Bay des Montons, 6.20 p.m.

September 8.—Left Bay des Montons, 9.10 a.m. Brought to at La Tabatière, 9.45 a.m. Left La Tabatière, 11.15 a.m. Anchored in Big Meccatina Harbour, 12 p.m. Left Big Meccatina Harbour, 1.10 p.m. Anchored at Kikapoe, 3.20 p.m. Left Kakapoe, 5.15 p.m. Anchored at Goose Bay, 7 p.m.

September 9.—Left Goose Bay, 8.45 a.m. Brought to at Point à Giroux, at 9.05 a.m. Left Point à Giroux, 9.30 a.m. Anchored at Mistanoque Bay, 11.20 p.m. Left Mistanoque Bay, 12.40 p.m. Anchored at Bay des Rochers, 2 p.m.

September 10—Left Bay des Rochers, 3 p.m. Anchored at Bonne Espérance, 6.20 p.m.

September 11.—Left Bonne Espérance, 10.30 a.m. Anchored at Salmon Bay, 11.15 a.m. Left Salmon Bay, 1.30 p.m. Anchored at Bonne Espérance, 2 p.m. Left Bonne Espérance, 3 p.m. Anchored at Blanc Sablon, 5.16 p.m.

September 12.—Left Blanc Sablon, 7.15 a.m. Anchored at Long Point, 8 a.m. left Long Point, 10.25 a.m. Anchored at Parrot Island, 10.40 a.m. Left Parrot Island, 2.15 p.m. Anchored at Dog Island, 7.15 p.m.

September 13.—Left Dog Island, 5.40 a.m. Anchored at Kikapoe, 11.15 a.m. left Kikapoe, 2.15 p.m. Brought to at La Tabatière, 3.20 p.m. Left Tabatière, 3.40 p.m. Brought to at Point Grand Meccatina, 4 p.m. Left Grand Meccatina, 4.47 p.m. Anchored at Whale Head, 10 p.m.

Sept. 14.—Left Whale Head, 5.20 a.m. Brought to at Harrington Inlet 7 a.m. Left Harrington Inlet, 8 a.m. Anchored at Kegashca, 5.35 p.m.

Sept. 15.—Left Kegashca, 10.45 a.m. Anchored at Washeecootai, 1.10 p.m.

- Sept. 16.—Left Washeecootai, 1 p.m. Anchored at Kegashca, 3.30 p.m.
- Sept. 19.—Left Kegashca, 8.45 a.m. Brought to at Esquimaux Point, 6 p.m. Left Esquimaux Point, 6.30 p.m. Anchored at Mingan Harbour, 8.20 p.m.
- Sept. 22.—Left Mingan Harbour, 8.20 a.m. Brought to at Long Point, 9.10 a.m. Left Long Point, 9.45 a.m. Anchored at St. John River, 10.10 a.m.
- Sept. 23.—Left St. John River, 9.20 a.m. Anchored at Douglastown, 9.20 p.m.
- Sept. 24.—Left Douglastown, 11.35 a.m. Anchored at Gaspé Basin, 12.20 p.m.
- Sept. 25.—Moored at Eden's Wharf, 6 a.m. Left the Wharf, 5 p.m.
- Sept. 27.—Left Gaspé Basin, 8.10 p.m. Brought to at Birch Point, Anticosti, 7.20 a.m. Left Birch Point, Anticosti, 12.40 p.m. Brought to at South Point, 4 p.m. Left South Point, 4.40 p.m. Anchored at East Point, Anticosti, 8 p.m.
- Sept. 29.—Left East Point, Anticosti, 6 a.m. Anchored at Reef Point, 7 a.m. Left Reef Point, 4.40 p.m.
- Sept. 30.—Anchored at English Bay, 11.30 a.m.
- October 1.—Left English Bay, 6.30 a.m. Anchored at Mingan Harbour, 10.20 a.m. Left Mingan Harbour, 12 p.m. Anchored at Esquimaux Point, 2 p.m. Left Esquimaux Point, 4.10 p.m. Anchored at Mingan, 6 p.m.
- October 2.—Left Mingan, 6.30 a.m. Brought to at Pigou, 2 p.m. Left Pigou, 3 p.m. Anchored at Moisie River, 4 p.m. Left Moisie River, 4.50 p.m. Anchored at Seven Islands, 7.15 p.m.
- October 3.—Left Seven Islands, 11.50 a.m. Anchored at Egg Island, 5.25 p.m.
- October 4.—Left Egg Island, 1.10 a.m. Anchored at Trinity Bay, 4.10 p.m.
- October 5.—Left Trinity Bay, 11 a.m. Anchored at Ruisseau à Rebours, south shore, 5.15 p.m. Left Ruisseau à Rebours, 5.52 p.m. Anchored at Magdalen, 8.30 p.m.
- October 7.—Left Magdalen, 9 a.m. Anchored at Cape Rosier, 2.45 p.m.
- October 8.—Left Cape Rosier, 7 a.m. Anchored at Malbay, 9 a.m. Left Malbay 4.35 p.m. Anchored at Gaspé Basin, 7.30 a.m. Moored at Le Boutilliers Wharf, 8 p.m.
- October 11.—Left Le Boutillier's Wharf, 3 p.m. Moored at Eden's Wharf, 3.30 p.m.
- October 13.—Left Eden's Wharf, 7 a.m. Anchored at Gaspé Basin, 7.35 a.m. Left Gaspé Basin, 2.20 p.m. Anchored at Point Periouille, 2.35 p.m.
- October 14.—Left Point Periouille, 2.20 a.m. Anchored at Douglastown, 3.25 a.m. Left Douglastown, 5.26 a.m. Anchored at Malbay, 7.50 a.m.
- October 15.—Left Malbay, 12.45 a.m. Anchored at House Harbour, Magdalen Islands, 5.15 p.m.
- October 16.—Left House Harbour, 1.24 p.m. Anchored at Amherst, 2.20 p.m. Left Amherst, 11.27 p.m. Anchored at House Harbour, Magdalen Islands, 0.25 a.m.
- October 19.—Left House Harbour, 5.35 a.m. Anchored at Amherst, 6.35 a.m. Left Amherst 11.40 a.m. Anchored at Bryon Island, 4.30 p.m.
- October 21.—Left Bryon Island, 2.30 a.m. Anchored at Malbay, 10.35 p.m.
- October 22.—Left Malbay, 3.40 p.m. Anchored at Gaspé Basin, 6.10 p.m.
- October 24.—Left Gaspé Basin, 1.10 p.m. Anchored at Percé, 4 p.m. Left Percé 6.10 p.m. Anchored at Port Daniel, 11 p.m.
- October 25.—Left Port Daniel, 11.40 a.m. Anchored at Maria, 5.15 p.m.
- October 26.—Left Maria, 1.5 p.m. Anchored at Carleton, 2.35 p.m.
- October 27.—Left Carleton, 1.30 p.m. Anchored at Port Daniel, 7.45 p.m.
- October 28.—Left Port Daniel, 1 p.m. Anchored at Gaspé Basin, 8.30 p.m. Moored at Eden's Wharf, 9 p.m.
- October 29.—Left Eden's Wharf, 11 a.m. Anchored at Gaspé Basin 11.30 a.m.
- October 30.—Left Gaspé Basin, 1.40 p.m. Anchored at Cape Rosier, 4.15 p.m.
- October 31.—Left Cape Rosier, 6.10 a.m. Anchored at Fox River, 7.55 a.m.
- November 1.—Left Fox River, 7.35 p.m.
- November 2.—Anchored at Cariboo Lighthouse, 10 p.m.
- November 3.—Left Caoiboo Lighthouse 6.45 a.m. Anchored at Pictou Harbour, 8.35 a.m. Left Pictou Harbour, 2 p.m. Moored at the Mine's Wharf, 2.30 p.m.

November 6.—Left the Mine's Wharf, 7 a.m. Anchored at Pictou, 7.35 p.m.

November 7.—Left Pictou, 7.20 a.m. Anchored in the Gut of Canso, 2.30 p.m.

November 8.—Anchored in Halifax Harbour, 1 p.m. Moored at the Government Wharf, 3 p.m.

November 10.—Part of the vessel's crew discharged go by rail to take the "Newfield," at Pictou, and from thence to Quebec.

I have the honor to be, Sir,

Your obedient servant,

N. LAVOIE,

Fishery Officer in command of the Fisheries Protection Steamer "Lady Head."

No.

 RETURN OF FISHING STATIONS, Number and Value of Fishing Boats and Nets,
 Shore of the River St. Lawrence, from Point

Name of Place.	Fishing Boats.	KINDS OF NETS USED.										No. of Salmon,	
		Salmon and Herring Nets.		Brush Fisheries with Nets.		Brush Fisheries.		Eel Fisheries.					
		No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.		
<i>South Coast.</i>		No.	\$	No.	\$	No.	\$	No.	\$	No.	\$	No.	
Pointe Lévis.....	8	180	6	.....	.....	6	2,100	.....	.....	.....	.....	263
Beaumont.....	5	220	3	.....	.....	3	1,150	.....	.....	.....	.....	283
St. Michel.....	6	240	3	.....	.....	3	1,420	.....	.....	.....	.....	115
St. Valier.....	4	150	3	.....	.....	3	4,200	.....	.....	.....	.....	100
Berthier.....	3	70	14	.....	.....	2	1,340	.....	.....	12	705	110
St. Thomas.....	1	25	29	.....	.....	1	600	9	900	18	740	.....
Cap St. Ignace.....	.....	11	.....	.....	.....	7	500	4	217	.....	.....	.....
Crane and Goose Islands.....	.....	15	.....	.....	.....	.....	.....	15	300	.....	.....	.....
L'Islet.....	.....	20	.....	.....	.....	.....	.....	21	1,260	.....	.....	.....
St. Jean, Port Joli.....	.....	39	.....	.....	.....	.....	.....	39	1,320	.....	.....	.....
St. Roch.....	.....	30	.....	.....	.....	6	416	24	1,046	.....	.....	.....
Ste. Anne.....	2	52	26	.....	.....	26	1,629	.....	.....	.....	.....	.....
Rivière Ouelle.....	.....	3	.....	.....	3	280	.....	.....	.....	.....	.....	.....
Pointe Rivière Ouelle.....	.....	41	2	200	40	1	200	.....	.....	33	3,585	125
St. Denis.....	.....	36	1	120	24	1	50	3	85	23	1,495	180
Kamouraska.....	.....	11	.....	.....	.....	2	200	6	435	.....	.....	.....
Islets aux Patins and other Islands, Kama- rouka.....	.....	26	.....	.....	.....	5	565	18	975	30	.....	.....
St. André.....	.....	70	.....	.....	.....	11	780	28	781	6	.....	.....
Notre Dame du Portage.....	.....	27	.....	.....	.....	2	52	24	463	.....	.....	.....
		Herring Nets.											
Rivière du Loup.....	14	175	32	7	224	420	.....	5	360	12	320	185
Cacouna.....	20	260	24	.....	.....	.....	13	980	4	100	407	.....
Isle Verte.....	48	436	50	.....	.....	.....	24	2,090	.....	.....	.....	67
Isle Verte, Mainland.....	2	430	20	.....	.....	9	630	.....	.....	.....	.....	7
Lake Temiscouata and Touladie River.....	18	102	24	16	564	44	.....	5	110	.....	.....	.....
Trois Pistoles.....	.....	15	.....	.....	.....	.....	11	345	.....	.....	27	.....
Saint Simon.....	7	116	14	.....	.....	8	154	1	12	.....	.....	587
Port au Pic.....	2	28	4	.....	.....	3	55	.....	.....	.....	.....	53
Pointe à la Cive.....	1	20	2	.....	.....	1	20	.....	.....	.....	.....	45
Anse à Mercier.....	2	45	4	.....	.....	1	15	1	40	.....	.....	52
Islet au Flacon.....	1	20	3	.....	.....	1	20	1	40	.....	.....	190
Baie de Ha ! Ha !.....	1	20	2	.....	.....	.....	2	100	.....	.....	.....	112
Cap à l'Orignal.....	1	10	2	.....	.....	.....	2	40	.....	.....	.....	17
Bic.....	.....	2	.....	.....	.....	.....	2	50	.....	.....	.....	60
Cap Enragé.....	1	18	2	1	200	20	.....	.....	.....	.....	.....	450
Islet Brûlé.....	2	55	5	.....	.....	1	20	3	70	.....	.....	325
Rivière Hâté.....	6	100	12	.....	.....	2	37	4	155	.....	.....	164
Anse au Sable.....	5	61	13	.....	.....	.....	5	285	.....	.....	.....	38
Islet à Canuel.....	1	12	2	.....	.....	.....	1	100	.....	.....	.....	100
Isle St. Barnabé.....	1	30	5	.....	.....	.....	4	160	.....	.....	.....	122
Rimouski.....	7	125	7	1	40	20	.....	5	85	.....	.....	247
Ste. Luce.....	15	130	16	1	75	45	.....	14	240	.....	.....	481
St. Flavie.....	4	60	4	.....	.....	.....	4	50	.....	.....	.....	35

2.

Number of Men, together with the Yield, Value and Kinds of Fish, on the South
Lévis to Cape Chatte, during the Year 1877.

KINDS OF FISH.

No. of Shad.	Herrings, Barrels.	No. of Eels.	Sturgeon, Barrels.	Sardines, Barrels.	Bar and White Fish, Doz.	No. of Bar Fish.	Small and Mixed Fish, Barrels.	Sea Trout, Lbs.	Mackerel, Barrels.	Codfish, Quintals.	No. of Seals and Skins.	No. of Porpoises and Skins.	Seal Oil, Gallons.	Porpoise Oil, Gallons.	Fish for Manure, Barrels.
2,908					106										
3,532			15		113										
1,850		1,330	6		570										
1,400		3,000	57		420										
700		3,248	5		710										
280		4,290	125		303	2,455		21							
		2,031	69		139	112	107								
		7,811					119								
		10,203						111							
		13,431						121							
		11,957	5					69							
		29,110	14			75		149							
		4,850						25							
500	10	40,700		6										1	60
2,450	7	12,525		120											500
200		1,075		400											12
															30
2,050	20	3,100	10	400				20							1,600
1,040	1,125	4,520	9	1,200				39							1,670
		1,422						30							
800	798	1,900		368				64						3	250
3,400	805	1,000		1,878				234						3	200
5,890	695			638				168						1	100
245	223			220				155						90	250
										15	3				440
374	498							282							
182	2							544							494
7								250							75
50								30							
60	30			6				10							200
12	25			25				54							50
50	60			10				44							125
200	400			55				27							350
600	80			60				82							650
200								27							
250	210			55				25							325
400	360			270				206							590
270	555			215				132							525
400	400			40				121							100
3,200	1,950			242				58							400
55	45	600		30				151							500
350	1,330			395				515							1,875
		175		95				400							250
								450		500					

RETURN OF FISHING STATIONS, Number and Value of Fishing Boats and Nets,
 Shore of the River St. Lawrence, from Point Lévis

Name of Place.	Fishing Boats.		KINDS OF NETS USED.								No. of Salmon.		
			Salmon and Herring Nets.		Brush Fisheries with Nets.		Brush Fisheries.		Eel Fisheries.				
	No.	Value.	No.	Yards.	No.	Value.	No.	Value.	No.	Value.			
<i>South Coast.—Continued.</i>													
Métis.....	5	75	5						5	70	115		
Boules.....	1	20	2	1 75	45						110		
Rivière Blanche			2						1	20	15		
St. Ulric			6						6	110	4		
Matane.....			17						16	288	12 39		
Ste. Felicité.....			14						13	182	4		
Islets des Méchins	1	20	2	1 40	16						106		
Méchins	2	25	4	2 100	40						302		
Capucin.....	21	420	23	1 40	16				1	20	125		
Fly Fishing :—													
River Rimouski.....											40		
do Matane.....											41		
do Metis.....											51		
Total.....	218	3,750	752	34	1,678	730	37	11,381	232	12,039	282	13,754	5,935

Number of Men, together with the Yield, Value and Kinds of Fish, on the South to Cape Chatte, during the Year 1877.—*Continued.*

KINDS OF FISH.

	No. of Shad.	Herrings, Barrels.	No. of Ecls.	Sturgeon, Barrels.	Sardines, Barrels.	Bar and White Fish, Doz.	No. of Bar Fish.	Small and Mixed Fish, Barrels.	Sea Trout, Lbs.	Mackerel, Barrels.	Codfish, Quintals.	No. of Seals and Skins.	No. of Porpoises and Skins.	Seal Oil, Gallons.	Porpoise Oil, Gallons.	Fish for Manure, Barrels.
20	245	.....	.....	98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	88	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	320
	294	40	.....	79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,400
	165	.....	.....	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,034
	.....	.....	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	400	.....	1,150	94	.....	.....	.....	.....
33,936	10,595	158,143	323½	7,410	2,361	2,642	5,595	400	4	2,220	254	15	11	90	860	20,807

RECAPITULATION.

YIELD and Value of the different Fisheries from Point Lévis to Cape Chatte, in 1877.

Kinds of Fish.	Quantities.	Price.	Value.
Codfish	2,220 quintals.	\$ 5 00	\$ 11,100 00
Shad	33,936 pieces.	0 10	3,373 60
Herring	10,595 barrels.	4 00	42,380 00
Salmon	5,935 pieces.	1 00	5,935 00
Sea Trout	400 lbs.	0 05	20 00
Sturgeon	323½ barrels.	8 00	2,588 00
Bar and Whitefish	2,361 dozen.	2 00	4,722 00
Bar Fish	2,642 pieces.	0 50	1,321 00
Sardines	7,410 barrels.	5 00	37,050 00
Eels	158,143 pieces.	0 10	15,814 30
Small and Mixed Fish	5,595 barrels.	0 50	2,797 50
Mackerel	4 do	10 00	40 00
Seal Skins	15 pieces.	1 25	18 75
Porpoise Skins	11 do	4 00	44 00
Seal Oil	90 gallons.	0 50	45 00
Porpoises Oil	860 do	0 80	688 00
Cod Oil	254 do	0 50	127 00
Fish used as Manure	20,807 barrels.	0 25	5,201 75
Total Value of the Products of the Fisheries in 1877.....			133,285 90
do	do	1876.	116,212 05
Increase			17,073 85

APPENDIX No. 3.

RETURN of Fishing Stations, Number and Value of Fishing Boats and Nets, Number of Men, together with the Yield, Value and Kinds of Fish, &c., on the North Side of the River St. Lawrence, from Quebec to Bersimis, during the Year 1877.

Name of Place.	Fishing Boats.	Kinds of Nets used.				Kinds of Fish.				No. of Sharks.
		No.	Value.	No.	Value.	No.	Value.	No.	Value.	
<i>Island of Orleans.</i>										
St. Laurent	2	\$76	2	440	220	.....	.....	135	1500	.....
St. Francois (south side of the Island)	7	.....	.....	.....	.....	8	\$74	3	27	.....
Argenteinay (south side of the Island)	6	.....	.....	.....	.....	5	60	.....	1480	.....
St. Francois (north side of the Island)	10	.....	.....	.....	.....	10	183	.....	910	.....
St. Famille (north side of the Island)	9	.....	.....	.....	.....	9	160	.....	1125	3
St. Pierre (north side of the Island) .....	.....	.....	.....	.....	.....	.....	.....	660	6	84
<i>North Coast.</i>										
Chateau Richer	4	.....	.....	.....	.....	3	57	6	69	275
Ste. Anne	6	.....	.....	.....	.....	.....	.....	9	171	24
St. Joachim (Parish)	14	.....	.....	.....	.....	14	174	.....	500	.....
St. Joachim (Farm)	9	.....	.....	.....	.....	9	171	.....	1433	.....
St. Joachim (Cape Tourmente)	5	.....	.....	.....	.....	5	.....	.....	1643	.....
								6	335	6850

RETURN of Fishing Stations, Number and Value of Fishing Boats and Nets, Number of Men, together with the Yield, Value and Kinds of Fish, &c., on the North side of the River St. Lawrence, &c.—Continued.

Name of Place.	Fishing Boats. No.	Kinds of Nets used.				Kinds of Fish.				No. of Sharks.
		Salmon Nets. No.	Brush Fisheries with Nets. No.	Brush Fish- eries. No.	Eel- Fish- eries. No.	Value. No.	Value. No.	Value. No.	Value. No.	
<i>North Coast.—Continued.</i>										
Tadoussac	10	1	70	1	50	\$	\$	\$	\$	350
Moulin Baude	1	20	1	65	40	.....	.....	200	.....	.....
Anse Puanie	1	20	1	70	45	.....	.....	40	.....	.....
Poînte à la Cariole	1	20	1	70	70	.....	.....	170	.....	.....
Anse aux Pilotes (for breeding purposes)	1	3	1	70	70	.....	.....	.....	.....	.....
Anse aux Basques and Bergeronnes	1	12	2	1	50	30	.....	.....	300	.....
Escommaines (West Point)	1	15	1	1	60	35	.....	.....	22	.....
Escommaines Bay	1	10	1	60	35	2	50	40	.....	7
Escommaines (East Point)	1	3	4	171	140	.....	.....	1	10	27
Islets Penches	3	70	1	.....	.....	.....	.....	80	.....	50
Little Escommaines	1	20	1	.....	.....	1	30	340	.....	.....
Little Romaine	1	20	1	.....	.....	1	25	.....	8	18
Bacons Bay	1	20	2	1	.....	2	60	.....	7	3
Baie Mille Vaches	1	20	3	.....	.....	3	90	.....	6	6
Pointe aux Bois Verts	1	1	1	1	60	1	25	.....	12	62
Portneuf	3	41	3	2	140	116	1	542	3	3
Sault au Cochon	1	20	1	1	60	60	.....	50	500	12
Baie de Laval	1	24	2	2	100	89	1	18	5	96
Pointe aux Colomiers	1	24	2	2	100	89	1	200	7	20
Islet Jérémie	1	20	2	1	70	30	1	50	3	30
Bersimis	1	3020	150	20	599	150	1	30	10	25
From Rivière au Canard to Bersimis	151	3020	150	20	599	150	1	30	1	1
Fly Fishing :—									1500	70 15000 8300
River à Mars									51	40
Anse St. Jean									8	24

No. of Skins.

No. of Proprieties.

No. of Seal Oils.

No. of Seals and Skins.

No. of Minnows.

No. of Eels.

No. of Shad.

No. of Salmon.

No. of Sardines.

No. of Whitefish.

No. of Barbs.

No. of Sturgeon.

No. of Herring.

No. of Minnows.

River St. Marguerite (N.E. Branch).....	4	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
River St. Marguerite (N.-W. Branch).....	7	159	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
River du Gouffre	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	387	5130	729	225	13139	2289	16	314	134	3196	208	3086	2865	1500	993	34316	25	600	522
																	718	381000	3290
																	114	15000	10233
																	40	4236	40

RECAPITULATION.

YIELD and Value of the different Fisheries from Quebec to Bersimis
in 1877.

Kinds of Fish.	Quantities.	Prices.	Value.
		\$ cts.	\$ cts.
Salmon	2,865 pieces.....	1 00	2,865 00
Herring, pickled.....	99½ barrels....	4 00	398 00
Shad.....	1,500 pieces.....	0 10	150 00
Sardines.....	660 barrels....	5 00	3,300 00
Winnonish.....	3,290 pieces.....	0 25	822 50
Trout, Sea, Speckled and Grey.....	381,000 lbs.....	0 08	30,430 00
Sturgeon.....	25 barrels....	8 00	200 00
Bar and Whitefish.....	522 dozen.....	2 00	1,044 00
Eel	34,316 pieces.....	0 10	3,431 60
Small and mixed Fish	718 barrels....	0 50	359 00
Seal Skins	1,500 pieces.....	1 25	1,875 00
Porpoise Skins.....	114 do	4 00	456 00
Shark	40 do	6 00	240 00
Seal Oil.....	15,000 gallons....	0 50	7,500 00
Porpoise Oil.....	10,233 do	0 80	8,186 40
Fish used as Manure	4,236	0 25	1,059 00
Total Value of the products of the Fisheries, 1877.....			62,366 50
do do do 1876.....			60,027 85
Increase.....			2,338 65

APPENDIX No. 4.

RETURN of Number and Value of Fishing Boats and Nets, together with the Yield, Value and Kinds of Fish, &c., in the Districts above Quebec, during the Year 1877.

Name of Place.	Fishing Boats.	Kinds of Nets used.										Kinds of Fish.												
		Gill Nets.	Seines.	Pounds Nets.	No.	Value.	Yards.	No.	Value.	Yards.	No.	Value.	Barrels.	No.	Value.	Barrels.	No.	Value.	Barrels.	No.	Value.	Mixed Fish, bars-	Fish for Manure,	barrels.
Three Rivers Division	200	6500	200	4	160	20	.....	.....	.....	.....	6	10000	.....	30000	.....	2000	20000	.....	.....	500	.....	100	.....	100
St. Francis do	6	150	6	4	160	20	.....	.....	.....	.....	4500	1500	2000	76	.....	50	2	100	50	60	10	.....	.....	.....
Sorel do	500	1600	500	100	2500	50	100	2000	1500	50	7500	25	2000	22	.....	.....	.....	.....	.....	.....	16	11	.....	.....
Magog do	9	65	9	4	128	50	5	147	100	.....	2561	.....	20000	.....	.....	.....	.....	.....	.....	.....	96	50	50	50
Missisquoi do	12	81	28	28	2148	208	11	944	181	267	150	.....	41135	4	.....	.....	.....	.....	.....	13	8½	477	477	477
Richelieu do	44	410	65	82	2148	208	11	795	478	.....	41501	.....	2900	10	30	30	30	30	30	50	10	50	25	25
Montreal do	250	1500	250	50	1000	25	25	500	300	.....	.....	.....	.....	2500	.....	.....	.....	.....	.....	.....	.....	.....	45	45
Terrebonne do .....	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	67	67	2500	2500	
Chateauguay and Beauharnois Division	60	1200	60	25	500	20	10	250	150	.....	150	.....	5	2840	50	.....	.....	.....	.....	800	500	10000	5	5
Argenteuil Division	14	163	50	10	400	34	34	386	12	720	240	.....	3	150	200	200	200	200	200	600	200	200	2000	2000
Lower Ottawa River Division	100	500	102	375	11250	386	12	720	240	.....	.....	.....	2000	25	500	500	500	500	500	500	500	500	500	500
Upper do do	40	320	50	90	2700	900	1	60	20	.....	.....	.....	.....	50000	5600	.....	50000	5600	5600	500	500	500	500	500
Gatineau Lakes Division, (angling) .....	.....	.....	250	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1000	1000	1000	1000	
Total.....	1235	12489	1580	740	20786	4493	175	6416	2369	2267	150	41501	617211	25	90285	269	77340	7656	24000	7075	525	1870½	775	16778

RECAPITULATION.

YIELD and Value of the different Fisheries in the Districts above Quebec
in 1877.

Kinds of Fish.	Quantities.	Prices.	Value.
		\$ cts.	\$ cts.
Salmon	6 pieces.....	1 00	6 00
Shad.....	17,211 do	0 10	1,721 10
Fresh-water Herrings	25 barrels.....	5 00	125 00
Eel .. .	90,285 pieces	0 10	9,028 50
Sturgeon.....	269 barrels.....	8 00	2,152 00
Speckled and Grey Trout.....	77,340 lbs.....	0 08	6,187 20
Bar and Whitefish.....	7,656 dozen.....	2 00	15,312 00
Tom Cod	20,000 bushels.....	0 50	10,000 00
Maskinongé	767 pieces.....	2 00	1,534 00
Bass	525 barrels.....	10 00	5,250 00
Pickerel	1,870½ do	10 00	18,705 00
Pike	775 do	10 00	7,750 00
Mixed Fish	16,778 do	5 00	83,890 00
Fish used as Manure.....	10 do	0 25*	2 50
Total Value of the Products of the Fisheries, 1877	do	do	166,663 30
do	do	1876	138,547 30
		Increase	28,116 00

No. 5.
GENERAL RECAPITULATION

OF the Yield and Value of the Fisheries on the North and South Shores of the River and Gulf St. Lawrence, from Quebec to Blanc Sablon, and from Point Lévis to Baie des Chaleurs, and in the Districts above Quebec, during the years 1876 and 1877.

Kinds of Fish.	1876.			1877.		
	Quantities.		Value.	Quantities.		Value.
			\$ cts.			\$ cts.
Summer Cod-fishing	185,165	qntls..	925,825 00	225,816	qntls..	1,129,080 00
Autumn do	40,931	do	204,655 00	37,626	do	188,130 00
Herrings, pickled	105,454	brels	421,816 00	73,924	brels	358,925 50
do smoked	832	boxes	208 00	700	boxes	175 00
do fresh-water	6 $\frac{1}{2}$	brels	32 50	25	brels	125 00
Mackerel	4,975	do	49,750 00	5,343 $\frac{1}{2}$	do	53,435 00
do preserved in cans				960	lbs	144 00
Haddock	347	qntls..	1,735 00	248	qntls	1,240 00
Ling	1,149	do	5,745 00	99	do	495 00
Halibut	183	brels	1,098 00	227 $\frac{1}{2}$	brels	1,365 00
Salmon, pickled	2,216	do	35,456 00	2,232 $\frac{1}{2}$	do	26,790 00
do fresh in ice	267,276 $\frac{1}{2}$	lbs	13,363 83	326,548	lbs	16,327 40
do	8,421	pieces	8,421 00	8,806	pieces	8,806 00
do smoked	1	box	4 00	1	box	4 00
do preserved in cans	50,901	lbs	7,635 15	100,605	lbs	15,090 75
Winnonish	3,000	pieces	750 00	3,290	pieces	822 50
Trout (Sea)	163 $\frac{1}{2}$	brels	1,308 00	276 $\frac{1}{2}$	brels	2,212 00
do Speckled and Grey	447,200	lbs	35,566 00	458,740	lbs	36,687 20
Sturgeon	559 $\frac{1}{2}$	brels	4,476 00	617 $\frac{1}{2}$	brels	4,940 00
Bar and Whitefish	10,209	doz	20,418 00	10,539	doz	21,078 00
Bar Fish				2,642	pieces	1,321 00
Shad	142,405	pieces	14,240 50	52,647	do	5,264 70
Sardines	1,830 $\frac{1}{2}$	brels	9,152 50	8,130	brels	40,650 00
Eels	47	do	470 00	23	do	230 00
do	291,737	pieces	29,173 70	282,744	pieces	28,274 40
Bass				525	brels	5,250 00
Pike	400	brels	4,000 00	775	do	7,750 00
Pickerel	695	do	6,950 00	1,870 $\frac{1}{2}$	do	18,705 00
Tom Cod	22,000	bush	11,000 00	20,000	bush	10,000 00
Tunny				2	brels	10 00
Small and mixed Fish	3,015	brels	1,507 50	6,313	do	3,156 50
Other Fish			500 00			
Mixed Fish	19,530	brels	97,650 00	16,778	brels	83,890 00
Maskinouge	617	pieces	1,234 00	767	pieces	1,534 00
Shark				40	do	240 00
Seal Skins	9,915	pieces	12,393 75	14,612	do	18,265 00
Porpoise Skins	212	do	848 00	137	do	548 00
Lobsters, preserved in cans	245,335	lbs	36,800 25	450,669	lbs	67,600 35
do fresh				5,000	do	250 00
Fish and Clams used as bait and manure	74,640	brels	32,700 00	206,649	brels	187,859 25
Fish used for local consumption				11,554 $\frac{1}{2}$	do	46,218 00
Cod Tongues and Sounds	177	brels	1,593 00	234	do	2,116 00
Seal Oil	55,126	galls	27,563 00	73,560	galls	56,780 00
Whale Oil	9,618	do	4,809 00	13,716	do	6,858 00
Porpoise Oil	9,610	do	7,684 00	11,188	do	8,950 40
Cod Oil	118,271	do	59,135 50	225,129	do	112,564 50
Total			2,097,667 18			2,560,147 45
Increase						2,097,667 18
						462,480 27

No. 6.

SYNOPSIS OF FISHERY OVERSEERS' AND GUARDIANS' REPORTS IN
THE PROVINCE OF QUEBEC, FOR THE YEAR 1877.

SOUTH SHORE DIVISION FROM POINT LEVIS TO CAPE CHATTE.

CLOVIS CARON,
JULES GAUVREAU,
HERMENEGILDE MARTIN,
L. E. GRONDIN,
VITAL CHAREST,

} Overseers.

The following comparative table exhibits the yield of the fisheries in this Division :—

	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.
Salmon (pieces).....	9,574	4,432	3,374	4,726	3,342	4,171	5,436	5,935
Shad do	16,249	25,035	18,410	18,094	20,583	85,822	117,927	33,936
Herrings (brls.).....	6,671	2,169	7,174	12,545	12,903	6,311	8,474	10,995
Sturgeon do	219	242	130	298	523	263	362	323½
Sardines (brls.).....	6,688	1,443	1,658	868	900	930	1,642	7,410
Cod (quintals).....	4,900	2,200	300	.....	3,200	2,500	4,000	2,220
Eels (pieces).....	109,125	109,204	73,353	96,734	121,442	125,550	144,726	158,143
Porpoises.....	208	115	6	.....	.....	.....	.....	11
Bar fish (doz.).....	.....	.....	.....	.....	.....	.....	.....	2,361
do (pieces) .....	.....	.....	.....	.....	.....	.....	.....	2,642
Total Value.....\$	168,830	48,251	54,087	78,218	110,899	82,918	96,704	124,328

For the greater efficiency of the service and the better protection of the fish, it was found advisable during the present year to appoint two new officers for this division, and the district is now subdivided as follows :—

1st Division, from Point Lévis to River Ouelle, under charge of Mr. Caron ;

2nd Division, from River Ouelle to Pointe à La Loupe (Green Island), together with adjacent Islands, under charge of Mr. Gauvreau ;

3rd Division, from Pointe à La Loupe (Green Island) to Rimouski River, under charge of Mr. Martin ;

4th Division, from Rimouski River to Rivière Blanche, under charge of Mr. Grondin ;

5th Division, from Rivière Blanche to Cape Chatte, under charge of Mr. Charest.

Mr. Caron reports that whatever difficulties and disputes existed at the time of his appointment in 1874 are now settled, and that peace and harmony reign among the fishermen. Fishing was better than last year, especially for salmon and eels; but, although the yield was larger, the value was less, owing to a decrease in prices.

The following is a comparative statement of the yield of salmon in Mr. Caron's division for the past three years:

In 1874, 527 salmon, weighing 8,959 lbs.; average weight, 17 lbs.
1875, 335 " 4,020 " 12 "
1876, 700 " 7,000 " 10 "
1877, 871 " 8,710 " 10 "

Thus showing an increase of 171 fish over the catch of 1876. A salmon weighing 12 pounds was caught in Rivière du Sud by Rev. Mr. Beaubien, of St. Pierre. This proves the attempts made by salmon to ascend this beautiful stream.

Shad fishing was not so good as last year, 10,779 fish only being caught, against 50,571 in 1876. No cause is alleged for this decrease.

The following comparative statement will show the yield of shad since 1874:—

1874.....	10,050	Shad.
1875.....	17,223	"
1876.....	50,571	"
1877.....	10,770	"

The fish sold for double the usual price, owing to a decrease in the catch.

Bar-fish and whitefish were as abundant as usual, the former especially, being much larger in size than in previous seasons. The catch amounted to 15,582 pounds, besides 2,484 small ones.

The following is a comparative statement of the yield of the sturgeon fishery:—

1874.....	333	Barrels.
1875.....	237	"
1876.....	219	"
1877.....	295	"

The statistics show a large increase in the yield of eels, especially at St. Anne de la Pocatière.

Comparative statement.

1874.....	58,641	Eels.
1875.....	62,133	"
1876.....	64,436	"
1877.....	93,741	"

Mr. Gauvreau reports fishing in his division as having been better and more remunerative than that of last year. The fishery laws were well observed. Some disputes occurred between neighbours, which were amicably settled to the satisfaction of all parties concerned. Mr. Gauvreau remarks that the large number of fishing stations renders them almost useless.

Mr. Martin reports the increase of fish as being very remarkable in his division. Sardines were abundant, and larger than during the previous seasons. Herring, capelin and salmon are also on the increase. The yield of shad, however, shows a falling off, when compared with 1876.

Mr. Grondin states that the fishery laws were well observed in his division, and that there was a large increase in the catch of fish.

Mr. Charest reports the yield of salmon as being smaller than that of last year. This he attributes to the clearness and low state of the water, which caused the fish to enter Matane River very early. From six to eight hundred fish went up as early

as June. Prosecutions were brought against the following parties for illegal fishing in Matane River.

Zepherin Lepage.....	\$ 10	fine.
Alex Fraser.....	1	"
Pierre Forbès	1	"
Elzear Lizotte	10	" or one month in gaol.
Alfred Forbès	100	" or two months in gaol.
Alfred Forbès	100	" " "
Elzear Lizotte.....	100	" " "

The following is the score of salmon angling in Rimouski River for the past thirteen years:—

1865.....	8	Salmon.
1866.....	32	"
1867.....	36	"
1868.....	48	"
1869.....	57	"
1870.....	18	"
1871.....	68	"
1872.....	47	"
1873.....	43	"
1874.....	73	"
1875.....	27	"
1876.....	35	"
1877.....	40	"

There were also caught with the fly in Metis River:—

1870	19	Salmon.
1871	30	"
1872	52	"
1873	51	"
1874	146	"
1875	36	"
1876	19	"
1877	41	"

And in Matane River:—

1574	49	Salmon.
1875	62	"
1876	121	"
1877	51	"

TEMISCOUTA DIVISION.

GEORGE GAGNON, }
CYRILLE DUBÉ, } *Guardians.*

The fish most common to this division is a species of fresh-water herring, known under the local name of *Pointu*. It is generally caught in nets during the months of October and November. The yield amounted last season to 282 barrels which were mostly taken in Touladi River and in Lake Temiscouta.

The fishery laws were frequently violated by poachers from New Brunswick, who fish with illegal nets, and even during the close season. Means will be taken to put a stop to these abuses.

CAPE CHATTE DIVISION.

JOSEPH I. LÉTOURNEAU, Overseer.

COMPARATIVE STATEMENT of the Yield of Fisheries in this Division.

Kinds of Fish.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.
Codfish	quintals.	7,635	8,666	6,354	5,625	4,160	3,860	6,840
Halibut.....	barrels..	12	7	11	.....	3	2	7
Salmon.....	do	25	20	8	26	23½	12	5
do (fish in ice).....	lbs.	.....	.....	.....	.....	.....	.....	1,407
do (smoked).....	boxes.	.....	.....	.....	.....	.....	.....	1
Herring.....	barrels.	25	34	37	27	45	2	376
Mackerel.....	do	.....	.....	.....	.....	.....	.....	34
Trout.....	do	8	13	10	9	3½	24	48½
Sardines.....	do	.....	.....	.....	.....	.....	.....	54½
Cod Tongues and Sounds	do	.....	.....	.....	.....	.....	.....	60
No. of Seals and Skins.....	.....	.....	.....	.....	.....	.....	.....	2
No. of Porpoises and Skins.....	.....	.....	.....	.....	.....	.....	.....	2
Seal Oil	gallons.	146	122	787	440	.....	.....	20
Porpoise Oil	do	.....	.....	.....	.....	.....	.....	60
Cod Oil	do	3,965	5,280	2,353	1,078	1,604	1,995	3,040
Fish used as Manure... barrels.	.....	300	1,300	260	1,500	3,000	12,266	2,955
Fish used for local consumption.....	do	.....	.....	.....	.....	.....	.....	12,670
								453

The fisheries of this division are already treated at length in Dr. Livoie's Report. There is a slight increase in the cod fishery. This increase would have been greater, but bait was scarce and had to be procured from the North Shore. Capelin appeared in abundance, but before the arrival of cod. No salmon nets were set. Fly-fishing in St. Anne des Monts River was not so good as usual, owing partly to want of experience on the part of anglers, and partly to the low state of the water.

The number of salmon caught with the fly in this river since 1871 is as follows:—

Year	No of Salmon.	Average weight.
1871.....	8 .....	....
1872.....	13 .....	....
1873.....	87	17½
1874.....	140	19½
1875.....	69	21
1876.....	116	19½
1877.....	76	18½

This Overseer ascended Cape Chatte River to a certain distance and saw a number of salmon sufficiently large to warrant his statement that they are increasing, although slowly. The greatest obstacle to the increase of salmon in this stream is the poaching carried on every other year. Last season no violations of the law were reported, but this year traces of poaching were discovered, and the Overseer hopes to be able to punish the offenders next summer.

This Overseer confiscated two *Nigogues* and other fishing implements from persons encamped near a pool well stocked with salmon.

Only a few barrels of herring were caught, the fish being of poor quality. Sardine fishing was very abundant, no less than sixty barrels being caught in two *fascines* fisheries.

MAGDALEN RIVER DIVISION.

MAGLOIRE LAURENDEAU, *Guardian.*

COMPARATIVE STATEMENT of the Yield of Fisheries in this Division.

Kinds of Fish.		1876.	1877.
Codfish.....	quintals...	19,887	20,151
Herring.....	barrels....	28	76
Mackerel.....	do		28
Trout.....	do	4	6
Salmon (pickled).....	do	70	52
do (fresh in ice)	lbs		1,000
Cod Oil.....	gallons....	19,887	18,534
Fish used for Bait and Manure.....	barrels....		6,310
Fish used for local consumption.....	do		788

This division extends from River Claude to Cape Rosiers. Cod fishing was better than last year. The fish were very abundant, and had it not been for want of bait, the yield would have been one-third larger than in 1876. Fall fishing was poor, owing to scarcity of bait and boisterous weather. Mackerel was abundant, and had fishermen of this division been provided with seines, they might have made good hauls. Salmon went up Magdalen River in large numbers this season. Fifty were killed with the fly, besides five barrels of trout. Salmon do not ascend beyond Grand Falls. At the foot of the falls there are several small pools where the fish spawn.

Herrings were scarce, a few barrels only being pickled for winter use. This Guardian reports no violation of the fishery laws, and says that the severe punishment inflicted last year had a good effect.

GASPE, MALBAIE AND PABOS DIVISIONS.

PHILIP VIBERT, JUNR., *Overseer.*

COMPARATIVE STATEMENT of the Yield of Fisheries in this Division.

Kinds of Fish.		1873.	1874.	1875.	1876.	1877.
Codfish.....	quintals....	53,041	46,623	61,691	60,993	73,537
Herring.....	barrels....	2,529	1,527	552	1,239	429
Mackerel do	do	563	170		2	131
Salmon (pickled).....	do	361	99	49	96	99
do (fresh in ice)	lbs		118,304	76,717	72,554	99,482
do (preserved in cans).....	do					10,000
Haddock.....	quintals....					186
Ling.....	do					62
Halibut.....	barrels....					1
Trout.....	do					179
Cod Tongues and Sounds	do					3
No. of Seal Skins						40
Seal Oil.....	gallons....	11,692				8,614
Whale Oil	do		16,300	20,306	9,368	59,714
Cod Oil.....	do	36,960	29,398	41,034	39,987	15,125
Fish used as Bait and Manure.....	barrels....					150
Fish used for local consumption.....	do					73,000
Lobsters (preserved in cans).....	lbs					

Mr. Vibert reports as follows:—

The salmon fishery yielded 418 barrels, against 391 last year. About 100,000 pounds were disposed of fresh, the remainder being pickled. Nets were set much earlier than in 1876.

Four slight infractions of the fishery laws were detected, and the offenders punished.

The statistics show that cod-fishing was better than last year, the average catch being from sixty to seventy quintals per boat, against forty quintals in 1876. Bait was plentiful at Grand River during the summer fishing, but at other places it was scarce. Fall fishing was very poor, owing to rough weather. Little Pabos fishermen did best.

Mackerel fishing was better than one might have been led to expect; 108 barrels being caught at Sandy Beach and Peninsula, besides a few barrels at other places.

Salmon angling in the St. John River was good; His Excellency the Governor-General and party killing forty-nine fish, weighing 628 pounds, besides six salmon caught by other anglers, which gives a total of fifty-five. The local guardian and others who went up this river report the number of fish as very large. Quite a number of young salmon-fry were seen in July.

Angling was indifferent in York River, owing to the low state of the water. The guardian, however, reports a large number of parent salmon on the breeding grounds.

Messrs. Guild & Barnes, of Boston, angled Dartmouth River and killed sixty-one salmon, weighing 801 pounds. Three were caught by others, weighing forty-five pounds; making a total of sixty-four salmon, weighing 846 pounds.

The Malbaie River guardian reported that he had noticed only two salmon in the pools up to the end of August, although quite a number were seen disporting themselves in the tideway. At a later period he noticed about sixty parent fish, and quite a number of young ones. This stream is evidently improving.

The anglers' catch in Grand River was ninety-two salmon, of the average weight of thirteen and a-half pounds. The lessee has a good guardian, and this stream is well protected.

The guardian at Little Pabos River counted from forty to fifty salmon at the falls during the month of August. The inhabitants are giving up the use of flambeaux; the fines imposed by Dr. Lavoie last year having brought about this good result.

Grand Pabos River was angled for a very short time, and the lessees caught eight or ten fish. Salmon were reported as being abundant, and the guardian counted about eighty fish below the falls, and states there must have been more above. Salmon spearing has not been quite given up here. One party was prosecuted and fined for this offence; the person who purchased the fish being also fined.

PORT DANIEL DIVISION.

JOHN PHELAN, *Overseer.*

COMPARATIVE STATEMENT of the Yield of the Fisheries in this Division.

	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Codfish	qutls.	8,145	6,967	6,175	8,970	7,590	6,175	4,465	5,245	7,046	5,555
Salmon	brls.	57	79	120	108	110	148	110	88	68	7
do (preserved)	lbs.										41,801
Herring	brls.	515	370	695	1,231	830	280	710	1,020	1,755	1,090
Mackerel	brls.										4
Cod Oil	galls.										5,120
Fish used as Bait and Manure	brls.										7,475
Fish used for local consumption	brls.										1,030
Lobsters (preserved in cans) lbs.											63,365

Salmon fishing was remarkably good. This year's catch is the largest since the present fishery laws came in force. The overseer learnt from gentlemen who had been up the east branch on a fishing excursion that the river was well stocked with smolts.

CASCAPEDEIA AND MARIA DIVISIONS.

R. W. H. DEMOCK, *Overseer.*

COMPARATIVE STATEMENT of the Yield of the Fisheries in this Division.

	1872.	1873.	1874.	1875.	1876.	1877.	
Codfish	quintals...	5,580	5,275	6,740	4,486	4,111	4,161
Herrings	barrels....	8,990	2,250	2,080	1,800	4,160	1,110
do (smoked)	boxes.....						700
Mackerel	barrels....	104	27	20	15		24
Haddock	quintals ..	133	83	122	76	66	62
Salmon (pickled)	barrels....						355
do	lbs.....	96,800	116,955	95,824	24,386	51,225	7,500
do (preserved in cans)	lbs						48,804
Ling	quintals ..						37
Trout	barrels....	3	5	15	17	17	35
Eels	do						21
Cod Tongues and Sounds	do						12
Cod Oil	Galls						3,051
Fish used as Bait and Manure	barrels....						9,343
Fish used for local consumption	do						1,716
Lobsters	lbs			4,176	5,844	5,016	35,200

Salmon appeared earlier than usual; they were noticed to ascend the Grand Cascapedia in May. The first salmon were caught in nets on the 22nd May. The catch in the estuary of the Grand Cascapedia and at Black Cape exceeds that of last year by seventy-three barrels. The catch on Maria Shore was not so favourable, owing to north-westerly winds, which prevailed during most of the fishing season.

Angling was very good on the Grand Cascapedia during the latter part of June and the first week in July. After these dates, the water kept too low for good sport. Three hundred and thirteen salmon were killed with the fly in this stream. Twenty salmon were caught in two days' fishing on the Bonaventure River. Rivers in this division are reported as being well stocked with breeding fish, particularly the Grand Cascapedia. The local guardian of this stream states that below the Forks he counted five salmon to one last season, and that he never saw so many fry as this year.

The following is the score of angling during the last seven years:—

GRAND CASCAPEDIA RIVER.

—	1871.	1872.	1873.	1874.	1875.	1876.	1877.
Number of salmon.....	44	136	68	418	269	369	313
Weight in lbs.	1,012	3,100	1,434	9,902	6,862	8,998	7,085
Average weight in lbs.	23	22 $\frac{1}{2}$	21 $\frac{1}{2}$	23 $\frac{1}{16}$	21 $\frac{1}{2}$	24 $\frac{1}{2}$	22 $\frac{1}{2}$

LITTLE CASCAPEDIA RIVER.

Number of salmon.....	Not angled.	11	3	4	14	4
Weight in lbs.		194	57	120	210	84
Average weight in lbs.		17 $\frac{1}{2}$	17 $\frac{5}{16}$	22	15	21

BONAVENTURE RIVER.

Number of salmon.....	60	30	22	15	26	45	21
Weight in lbs.	770	487	366	225	290	622	331 $\frac{1}{2}$
Average weight in lbs.	13	16	16 $\frac{1}{2}$	15	11 $\frac{4}{5}$	14	16

MATAPEDIA AND RESTIGOUACHE DIVISIONS.

JOHN MOWAT, *Overseer.*

Mr. Mowat states that there are now eighty-nine licensed salmon stations on the New Brunswick side of his division, and eleven on the Quebec side, making one hundred in all. The catch, if equally divided, would amount to \$216 per station, but several of these stations did not realize half that sum, particularly where the stands are close to one another.

The new rate of paying so much per fathom of net used worked well, and no trouble was experienced in collecting the license fees.

Salmon entered the Restigouche River before the 25th May, and the few nets set at that time made large hauls. A salmon was caught with the fly at Dee Side, twenty miles up the river, on the 27th May; the water being then very clear. This run continued until 10th June, when it stopped; very few fish entering the river after that date. Fly as well as net-fishermen were hardly prepared for this early run; a large stock of fish were in consequence enabled to reach the upper waters.

In order to test the run of winter fish, two stations were set at the Tide Head after 10th September for about a month, with unsatisfactory results. One of these stands caught three fish and liberated four others. They were all summer fish which would have spawned in October. The other stand caught only one fish of the same

description. This poor success, coupled with the formation of ice, caused the nets to be taken out before 1st November. The Overseer, however, states he has every reason to believe that the winter fish entered after that date, as a large school of salmon, perfectly bright, were noticed in the river between the middle and latter end of November, but owing to floating ice it would have been impossible to capture them. The Kedgwick River guardian also states that a new run of fish passed his station after the others had done spawning.

The pool at the mouth of Matapedia River, having been licensed to Mr. Daniel Fraser, a great deal of extra labour was thereby saved to the Overseer, who was enabled to pay more attention to distant portions of his large division. Although anglers, as a rule, are difficult to please, very few complaints were made. Most of the trouble arose out of the crowding of sportsmen in the main pool at Matapedia; and, although some very fine pools exist nearer tide head, from some cause or another, the anglers do not care to visit or try them.

Angling was very good on the Matapedia. The lessee intends next spring placing some fry of land-locked salmon in Lake Matapedia. They will be procured from the hatching house at Selac, Maine.

Parr and smolt were quite numerous in the fall, and less illegal fishing was attempted than usual; the facilities of quick travel by rail efficiently assisting the guardians in protecting their respective divisions. Very little angling was done on the Upsalquitch River.

The score of angling is as follows:—

	No of Salmon.	Average weight.
Restigouche River, Upper Division	209	20 $\frac{7}{8}$ Lbs.
do Middle do	184	19 $\frac{3}{4}$ "
do Lower do	210	20 $\frac{1}{2}$ "
Matapedia River.....	116	21 $\frac{3}{4}$ "
Upsalquitch River	6	14 $\frac{1}{2}$ "
 Total.....	 725	 15,373 "

GRILSE.

Upper Division.....	17 Grilse.
Middle do	54 "
Lower do	45 "
Upsalquitch	8 "
Matapedia	32 "
 Total.....	 156 "

weighing from three to four pounds.

A much larger number were undoubtedly caught, of which no returns were given. As an instance of trout fishing, Mr. Tiffany, of New York, reported having caught at Tracy's Brook, in a little over an hour's fishing, seventy trout, averaging two pounds and a quarter. This fact is unusual in this river, and can only occur at rare intervals and under very favourable circumstances.

QUEBEC AND MONTMORENCY DIVISIONS.

L. P. HUOT, *Overseer.*D. ROSA, *Guardian.*

The following is a comparative statement of the Fisheries in this division:—

—	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.
No. of Salmon	96	91	82	150	114	60	52	135
do Shad	1,057	1,100	1,550	1,600	2,250	1,850	2,450	1,500
do Eels	19,059	14,728	51,932 doz.	9,202 brls.	11,856	5,317	8,628	14,676
do Sturgeon	1,314	1,882	1,901	83	32½	12	18	14
do doz. Bar and Whitefish..	1,902	2,126	2,074	417	712	294	338	192
do brls. Small Fish	271	759	412	66	92	40	51	.....

Bar-fishing was very poor. This fish seems to be disappearing gradually since 1872 from the waters of this division. On the other hand, salmon and eel-fishing were considerably in excess of that of last season. Shad and smelt-fishing were also very remunerative.

All the fish caught in this division is used for home consumption.

The following persons were prosecuted and fined by Mr. Huot for violations the fishery laws:—

Regis Marquis, nets illegally set; fined.....	\$5 00
Pierre Deblois do do	5 00
Jean Guérard do do	2 00
Jean Lemelin do do	2 00

Besides these prosecutions, the Fishery Guardian, Mr. Rosa, confiscated a large quantity of speckled trout, caught during the close-time, and seized thirty-seven night lines set in Lake St. Charles.

MURRAY BAY DIVISION.

J. E. DEMEULES,
ANT. FILION,
JOS. SIMARD,
ETIENNE TREMBLAY, } Guardians.

Mr. Demeules reports fishing as generally good in his division. The fishery laws were well complied with.

Mr. Simard estimates the catch of trout in the lakes of his division as follows:—

	Barrels.
Big Lake Nairne	50
Little do	30
Lake St. Hilarion.....	10
Lake Pointe à Jérôme.....	6
Lakes Long and des Monts.....	20

Mr. Filion reports the quantity of trout caught in the lakes under his charge at 6,000 lbs. He complains that poaching is extensively carried on by hunters frequenting this locality. He could, however, bring no prosecution, the offenders resorting to the woods and hiding there.

LAKE ST. JOHN DIVISION.

JOB BILODEAU, *Guardian.*

Comparative statement of the yield of the Fisheries in this division:—

	1874.	1875.	1876.	1877.
No. of Winnonish.....	7,500	9,050	3,000	3,050
do doz. of Whitefish....	1,162	440	350	285

This yield of Winnonish is somewhat larger than that of last season. The fry seemed to be numerous near the shores of Lake St. John, and with proper protection it is considered the Lake will be well stocked in a few years.

SAGUENAY DIVISION.

FERDINAND SAILLANT, *Overseer.*JOSEPH BOILY, *Guardian.*

Yield of salmon net-fishing for the past seven years:—

In 1870	3,275	salmon.
1871	3,462	do
1872	3,312	do
1873	2,481	do
1874	2,482	do
1875	981	do
1876	2,830	do
1877	2,362	do

Although several of the best stations were not fished this season, the increase in the yield of salmon was very considerable.

RIVER BERSIMIS.

Up to the 15th July, ten salmon only had been caught in this river; as stated in previous reports, it is nearly ruined.

LAVAL BAY.

Owing to the large quantity of saw-logs scattered over this station, it could not be fished. Salmon were thus enabled to ascend to their spawning grounds in larger numbers than last year.

SAULT AU COCHON.

Only one net was set at this station and thirteen salmon were caught.

PATTE DE LIÈVRE

Not fished.

PORTNEUF SHOALS.

Fishing on this station began only late in June; the catch however amounted to 530 salmon.

ISLETS PENCHÉS.

The yield at this station shows an increase of fifty-seven salmon over that of last year.

ESCOUMAINS RIVER.

The guardian states that the fish-way on that river is in good order.

ANSE AUX BASQUES.

Twenty-five salmon were caught at this station.

ANSE AUX PILOTES.

This station was fished to supply the Tadousac Breeding-Establishment with parent fish. The catch amounted to 102 salmon.

POINTE ROUGE.

Over 600 salmon were caught at this station, although the nets were raised twice a week, in addition to the usual Sunday close-time. This liberal arrangement was made with the lessees of Ste. Marguerite River, in order to afford better sport for anglers visiting that stream.

SAGUENAY RIVER.

About one hundred salmon were caught at Petites Isles, and taken alive to the Tadousac Establishment.

RIVER À MARS

No less than 600 salmon ascended the fish-way at Abel Tremblay's dam; salmon fry are abundant all along the stream.

GRAND BAY.

The fish-way at Hon. D. E. Price's mill, has been repaired and will be of great advantage in future. About twenty salmon went up the river this year.

ETERNITY RIVER.

This is considered a good river for the natural reproduction of salmon and trout. Fish can ascend it without meeting any obstacles for fifteen miles, and all along that distance, spawning beds are numerous and large enough to accommodate hundreds of fish; at about fifteen miles from the mouth of the river is a large lake. The two guardians placed on that stream last season report it as being full of large and small salmon.

ANSE ST. JEAN RIVER.

The spawning grounds are reported as being covered with parent salmon; trout and minnowish also frequent this stream; salmon and trout-fry were very numerous. The prosecutions mentioned in the Overseers' report of last year were completed this season by the conviction of the whole gang of poachers, the members of which were condemned to pay a fine of \$20 each.

STE. MARGUERITE RIVER.

Undoubtedly the best salmon stream in this division. The north-west branch is 60 miles long; and the north-east, six miles. On the north-west branch, 190 salmon were killed with the fly, and forty-eight on the north-east branch. The average weight of the fish was twenty pounds against twelve and a half and thirteen pounds in previous years. One angler caught seventy-three fish. The river is so efficiently guarded that no violations of the law have been reported for a number of years.

The following is the score of angling in the Saguenay Rivers for the past six years:

	1872.	1873.	1874.	1875.	1876.	1877.
River St. Marguerite, N W. Branch.....	112	125	133	77	25	159
River St. Marguerite, N.E. Branch	53	50	150	55	49	46
River à Mars	3	28	75	28	57	51
do Anse St. Jean	13	39	71	31	25	8
do Petit Saguenay..	11	Not angled.	83	39	14	Not angled.
do Laval.	Not angled.	do	Not angled.	Not angled.	6	do

NET-FISHING.

The yield of salmon net-fishing was not satisfactory. The fishermen attribute their failure to calm weather. They state that salmon were in hundreds nearing the shore, and that they took to deep water when approaching the nets. Violations of the law were numerous in the lower part of this division. The following parties were convicted and fined:—

		Fine.	Costs.
Xavier Pinault, fishing without license.....		\$10 00	and \$3 25
Henri Fortin, trespassing on licensed limits.....	20 00	"	6 00
Alpheo Fortin, do do do	20 00	"	5 75
Emilien Simard, do do do	20 00	"	5 50
Phileas Fortin, do do do	20 00	"	5 75
Paschal Emond, fishing without license.....	4 00	"	1 75
Benj. Mailloux, do do	4 00	"	1 75
— Jobin, do do	4 00	"	1 75
Joseph St. Pierre, do do	4 00	"	1 75
Denis Gauthier, do do	20.00	"	7 00
Elie Mailloux, do do	20 00	"	6 75
Etienne Dufour, sen., do	7 50	}"	4 10
do barring channels.....	7 50	}"	
Etienne Dufour, jun., do	4 00	"	1 75
Reule Dufourd, do	4 00	"	1 75

GODBOUT DIVISION.

GEORGE L. DUGUAY, *Guardian.*

COMPARATIVE STATEMENT of the Yield of Fisheries in this division.

		1876.	1877.
Codfish.....	quintals		305
Herring.....	barrels.....		4
Salmon (pickled).....	do	10	1
do (fresh in ice).....	lbs.....		5,754
Trout.....	barrels.....		5½
Number of Seal Skins.....		190	200
Seal Oil.....	gallons.....	705	1,000
Cod Oil.....	do		100
Fish used as Bait and Manure.....	barrels.....		115
do for local Consumption.....	do		27

The following is the number of salmon caught with the fly in Godbout River for the past eight years:—

	Salmon.
1870.....	390
1871.....	509
1872.....	275
1873.....	130
1874.....	273
1875.....	210
1876.....	213
1877.....	411

Codfishing was good, especially fall fishing at Godbout and St. Nicholas; Fishermen along that coast took sufficient for the winter. The south shore fishermen who visited this locality caught 400 quintals of cod at Godbout and St. Nicholas, and 200 at Pointe des Monts; they also carried away 115 barrels of clams to be used as bait in codfishing on the South shore.

Seal hunters killed 200 seals, yielding 1,000 gallons of oil. The nets of one Thibault, were confiscated, and the offender fined for violation of the fishery laws and for having defied the authority of the guardian.

PENTECOST AND SEVEN ISLANDS DIVISIONS.

J. O. BELANGER, *Guardian.*

COMPARATIVE STATEMENT of the Yield of Fisheries in this division.

	1871.	1872.	1873.	1874.	1875.	1876.	1877.
Codfish.....	quintals	960	1,865	2,150	1,939	300	612
Herring.....	barrels.....		150	.....	96	10	791
Mackerel.....	do	64	200	3	10	.....	277
Salmon (pickled).....	do	44	80	26	31	20	95
do (fresh in ice).....	lbs						4,037
Trout.....	barrels.....					18½	61½
No. of Seal Skins.....						44	114
Cod Oil.....	gallons.....	430	1,346	880	545	297	678
Seal Oil.....	do			300	.....	570	264
Fish used for Bait and Manure	barrels.....						767
do Local Consump-							2,404
tion.....	do						111

Seal-fishing yielded 114 seals and 767 gallons of oil, against 44 seals and 264 gallons of oil last year. Salmon-fishing was not so good as last year, owing to strong winds which drove the fish from shore; they were also of a smaller size than in previous seasons. The rivers were nevertheless well stocked. Trout-fishing shows an increase of forty-three barrels over the catch of last year. Cod-fishing was very good, the yield being 3,307 quintals, against 612 in 1876. The bait used was launce herring and clams.

MOISIE DIVISION.

G. MATHURIN, *Guardian.*

COMPARATIVE STATEMENT of the Yield of Fisheries in this division.

Salmon-fishing was somewhat better than last year. Fly-fishing in Moisie River would have been better had anglers come earlier. However, 107 salmon were killed with the fly against sixty-eight in 1876.

The following is the score of angling in Moisie River for the past five years:—

In 1873	281	salmon
1874	256	"
1875	97	"
1876	68	"
1877	107	"

Cod-fishing shows an increase of 2,894 quintals. Fish were numerous in the fall but stormy weather prevented fishermen from going out. The residents at Seven Islands, Ste. Marguerite and Moisie are amply supplied with provisions for their winter. The fishery laws were well complied with.

MINGAN DIVISION.

DONALD B. MCGIE, *Overseer*.

COMPARATIVE STATEMENT of the Yield of Fisheries in this Division.

NATASHQUAN DIVISION.

J. B. COUILLARD, *Guardian.*

COMPARATIVE STATEMENT of the Yield of Fisheries in this Division.

		1871.	1872.	1873.	1874.	1875.	1876.	1877.
Codfish	quintals ..	4,766	5,794	3,657	3,615	1,250	4,340	4,004
Herring	barrels ..	114	654	483	420	125	203	821
Salmon, pickled ..	do ..	298	605	150	404	39 ²	400	504
do preserved	lbs.....			113,727	50,000	60,000		
do (fresh in ice)	do							245
Mackerel	barrels							7
Trout	do							6 ¹ ₂
Tunny	do							2
Cod Tongues and Sounds	do							2
Number of Seal Skins				1,085	1,213	1,330	122	421
Cod Oil	gallons ..	2,118	1,674	1,781	2,494	1,800	3,876	2,991
Seal Oil	do ..	18,030	3,891	2,380	2,947	6,820	450	1,063
Fish used as bait and manure barrels								513
do for local consumption	do							47

The former guardian of this division, Mr. Gilbert Boulet, being old and inefficient, had to be replaced this season by a more intelligent and active man. The present guardian fulfilled his duties in a very satisfactory manner.

WATSHESHOO DIVISION.

P. C. GOBEIL, *Guardian.*

COMPARATIVE STATEMENT of the Yield of Fisheries in this Division.

		1872.	1873.	1874.	1875.	1876.	1877.
Codfish	quintals		380	560	110	865	389
Salmon	barrels ..	29	52	33	25	30	45
do fresh in ice	lbs						28
Trout	barrels		4	2	2	2	2
Number of Seal Skins		809	967	519	840	163	
Herring	barrels			1	329		250 ¹ ₂
Halibut	do						284 ¹ ₂
Seal Oil	gallons ..						245
Cod Oil	do						
Fish used as bait and manure	barrels						21
Fish used for local consumption	do						10 ¹ ₂

PACACHOO DIVISION.

J. LEGOUVÉ, *Guardian.*

COMPARATIVE STATEMENT of the Yield of Fisheries in this Division.

		1873.	1874.	1875.	1876.	1877.
Codfish	quintals.	2,655	3,760	844	1,560	1,969
Halibut	barrels...	200	.....	.....	426	.....
Salmon	do ...	180	955	206	485	353 $\frac{1}{2}$
Trout	do ...	8	2	37	35	22 $\frac{1}{2}$
Number of Seal Skins		1,144	248	173	310	779
Cod Oil	gallons..	1,574	2,954	590	1,127	1,901
Seal Oil	do ...	9,526	1,745	1,238	751	4,306
Whale Oil	do ...	400	.....	.....	.....	.....
Herring	barrels ..	.....	.....	2,301	426	49
Mackerel	do ...	.....	.....	.....	.....	169 $\frac{1}{2}$
Fish used as bait and manure	do ...	.....	.....	.....	.....	2,388
do for local consumption	do ...	.....	.....	.....	.....	32

Seal-fishing, although not very productive, was somewhat better than last year. The weather kept so fine and the water so clear that salmon went up earlier than usual; this caused a slight decrease in the yield of net-fishing. The fishermen would however feel satisfied with their catch had not prices been so low; they could hardly cover their expenses. Cod-fishing was somewhat better than for the last two years. Herring-fishing was a complete failure. Mackerel has reappeared for the first time since several years; 170 barrels having been taken with seines. The fishermen rely upon a larger yield next season. The fishery laws are well and cheerfully complied with by the fishermen who are now convinced of the advantage they derive from the protection given them. The storm of 18th December last proved very disastrous. The sea rose six feet higher than ever known, carrying away everything, boats, sheds, nets, seines, salt, barrels, &c. This unfortunate occurrence deprived several of the fishermen of the means of carrying on their fishing operations as usual. Happily, no lives were lost.

BONNE ESPERANCE DIVISION.

W. H. WHITELY, *Guardian.*

COMPARATIVE STATEMENT of the Yield of Fisheries in this Division.

		1873.	1874.	1875.	1876.	1877.
Codfish	quin.	4,960	7,710	5,062	61,800	85,975
Salmon	brls.	172	136	118	312	201
Herring	do	250	.....	.....	.....	240
Mackerel	do	.....	.....	.....	.....	12
No. of Seal Skins .....		.....	.....	.....	3,027	3,230
Cod Oil	galls.	6,170	5,060	4,357	8,085	85,975
Seal Oil	do	1,160	2,630	5,660	20,700	22,060
Whale Oil	do	.....	.....	1,500	.....	.....
Fish used as bait and manure..	brls.	.....	.....	.....	.....	105,050
do for local consumption	do	.....	.....	.....	.....	4,500
Lobsters, fresh	lbs.	.....	.....	.....	.....	5,000

Full details of the fisheries of this division are given in Dr. Lavoie's report.

ANTICOSTI DIVISION.

A. MALOUIN,
THOMAS GAGNE, } Guardians.

COMPARATIVE STATEMENT of the Yield of Fisheries in this Division.

			1876.	1877.
Codfish.....	quin.	6,806	8,303	
Herring.....	brls.	4,410	16,214	
Mackerel.....	do		18	
Halibut.....	do	94	164	
Salmon, pickled.....	do	72	75 $\frac{1}{2}$	
Trout.....	do	14	14	
Eel.....	do	1	2	
Cod Tongues and Sounds.....	do	8	35	
Seal Skins.....	pieces.	145	356	
Seal Oil.....	galls.	318	811	
Whale Oil.....	do	250	2,840	
Cod Oil.....	do	5,081	4,935	
Fish used as bait and manure.....	brls.		3,636	
do for local consumption.....	do		469	

Full details of the fisheries of this division are given in Dr. Lavoie's report.

MAGDALEN ISLANDS DIVISION.

J. J. Fox, Overseer.

COMPARATIVE STATEMENT of the Yield of Fisheries in this Division.

		1872.	1873.	1874.	1875.	1876.	1877.
Codfish.....	quin.	20,632	17,048	13,840	13,035	10,957	11,179
Herring.....	brls.	2,956	4,847	12,137	49,951	77,443	38,231
Mackerel.....	do	1,172	5,494	6,569	6,448	4,969	4,912
Seal Skins.....	No.	1,713	5,590	4,555	16,447	3,529	4,838
Cod Oil.....	galls.	9,306	6,050	7,395	8,527	4,630	10,705
Seal Oil.....	do	8,040	19,685	21,915	63,024	17,720	15,790
Whale Oil.....	do	2,162			975		
Lobsters.....	lbs.					124,000	277,104
Mackerel, preserved.....	do						960
Fish used as bait and manure.....	brls.						1,923
do for local consumption	do						1,767

Full details on the fisheries of Magdalen Islands are given in Dr. Lavoie's report; said details being compiled from information and statistics supplied by the fishery overseer, Mr. Fox.

ST. FRANCIS DIVISION.

W. C. WILLIS, *Overseer.*A. H. N. BRUCE, }
G. G. GAGNON, } *Guardians.*

Overseer Willis reports lake and river-fishing as good. Ten thousand Lake Ontario salmon fry, and two thousand speckled trout fry, from the Newcastle Breeding House, were safely deposited at the foot of the rapids in Magog River in May last. Three salmon-fishing licenses were issued and only five or six fish were caught. This poor success was mainly due to the low state of the water; so soon, however, as the rains set in, the fish began to ascend in large numbers about the middle of August. Young fry were quite plentiful in Salmon River; several being caught with the fly. A new fishway has been built on the mill-dam at Scotstown, on an improved model. It seems, so far, to answer the purpose well. The catch of all kinds of fish may be estimated at 400 barrels. Lunge sold on the spot at fifteen cents a pound; pickerel and eels, from eight to ten cents. Better prices were obtained across the lines where much of this fish found its way. Two nets were confiscated for illegal fishing. Several attempts at poaching were made, but frustrated.

Mr. A. H. N. Bruce, who has charge of Lake Megantic and surrounding waters, reports that, from the middle of May to the latter part of June, speckled trout were plentiful in the Rivers Chaudière, Spider and Arnold. After these dates, they retire to deep water and do not re-appear until about the end of August. In the Chaudière River, the catch of speckled-trout, during the latter half of the month of September, was especially good, over six hundred pounds weight of these fish being killed by visitors, mostly with the fly. The largest fish weighed five pounds.

Lunge or lake-trout, first took bait about the middle of May; there were not, however, so many caught with hand-lines as formerly. During the month of June and the early part of July, they took artifical revolving bait very well. A gentleman from Sherbrooke killed two hundred pounds weight in this manner in three days, fishing; the largest fish weighing thirteen pounds. Black bass were plentiful. This guardian confiscated four nets for illegal fishing.

LAKE MEMPHREMAGOG DIVISION.

S. F. COPP, *Overseer.*

The law was exceedingly well observed in this division last season; the Overseer reporting no violations. With the assistance of special constables, Mr. Copp succeeded in deterring poachers from all illegal fishing. The catch of fish, as far as can be ascertained, is as follows:—

Lunge or lake-trout,	50	barrels,	value	\$1,250	00
Fresh-water herring	28	"	"	280	00
Pickerel	21	"	"	210	00
Total value.....					\$1,740 00

To these figures must be added about five tons of lunge caught with hook and line by anglers. On the whole, last year's catch in this division shows a large increase over that of 1876.

MISSISSOUI BAY DIVISION.

P. E. LUKE, *Overseer.*

COMPARATIVE STATEMENT of the Yield of the Fisheries in this Division :—

	1876.	1877.
Value of fishing boats and nets.....	\$778 00	\$412 00
" Shad.....	267 00	256 00
" Pickerel.....	450 00	960 00
" Mixed fish.....	60 00	250 00
	\$1,555 00	\$1,878 00

There were only twelve persons engaged fishing this season, against twenty last year. Most of the fish were sent to New York market, the balance being used for home consumption. The close-seasons were well observed.

RICHELIEU DIVISION.

J. B. CHEVALIER, *Overseer.*

This Overseer reports the catch of fish in this Division as follows :—

Number of Eels, 41,135.....	value	\$3,932 00
" " Sturgeon, 32.....	"	32 00
" " Pickerel, 841	"	130 00
" " Bass, 1,308.....	"	85 00
" " Mixed fish.....	"	2,385 00
		\$6,564 00
Total value.....		

A large number of eels are also caught with set-lines and used for home consumption; no reliable returns of which can be obtained. Fourteen young salmon were caught in eel-traps set in the rapids opposite the town of St. John, eight of which were liberated alive; the others were wounded and died. No violations of the law are reported.

CHAMBLY DIVISION.

H. W. AUSTIN, *Overseer.*

This Overseer reports a large increase in the catch of pickerel; as many as twenty or twenty-five being taken at every haul of the seine, early in the spring. Since the eel-weirs at the Canton Rapids were removed, the lake at its inlet is full of these fish, and people come from long distances to take them.

SOREL DIVISION.

PIERRE LATRAVERSE, *Overseer.*

This Overseer reports a falling off in the catch of shad and eels; but an improvement in other kinds of fishing. This division is a very important one and comprises favourite breeding grounds of pickerel around Sorel and the neighbouring islands. The fishermen of the locality all fish under licenses, thus preventing strangers from injuring and interfering with the fishing grounds. They bound themselves to strictly comply with the fishery laws and regulations, and, in order to better protect the young fry, they willingly gave up seine-hauling altogether during the months of July and August, to be resumed only in September, when the fry are sufficiently grown up to be able to escape.

CHATEAUGUAY DIVISION.

WILLIAM CLYLE, }
ANDREW WATT, } *Guardians.*

Both these officers report fishing about as good as last year, and that the law was well complied with in their division.

ARGENTEUIL DIVISION.

ALEXANDER BEATON, }
DUNCAN DEWAR, } *Overseers.*
THOMAS EVANS,

It was found necessary to appoint two new officers in this division last season. Mr. Beaton resides in the township of Harrington, and has charge of the upper portion of the county of Argenteuil. Mr. Dewar resides at St. Andrews, and superintends the North River, in which 20,000 young salmon were placed during the spring of 1877. Mr. Thomas Evans' limits comprise the eastern upper part of the county of Argenteuil and adjoining lakes in the county of Terrebonne.

These officers report an improvement in fishing, and state that only a few slight violations of the law came under their notice.

TERREBONNE DIVISION.

L. J. LORANGER, *Overseer.*

This Overseer reports no violations of the law during the season. Fishing was good; 2,500 pounds of speckled trout being sent to New York and Saratoga by one firm alone. The quantity would be much larger, were it possible to reach some of the lakes. The fish has to be carried from eighteen to twenty miles in the bush before roads are met with, and then carted distances of from fifty to sixty miles to the nearest railway station.

OTTAWA COUNTY DIVISION.

Strict watch was kept over this division during the present season. Special guardians and, occasionally, members of the Dominion police force were employed during the various close-seasons, and located at the most central places. The protection was fair and as efficient as could be expected from the large extent of water to protect, and the number of lakes to guard. One hundred and sixty-two licenses were issued free of charge during the season. Forty-seven nets were confiscated for being set on Sunday. Their owners being unknown could not be further prosecuted.

No. 7.

SCHEDULE of Salmon Angling in the leased Rivers of the Provinces of Quebec and New Brunswick during the Season of 1877.

Name of River.	Number of Salmon.		Total Weight.		Average Weight.	Weight of largest fish.	Weight of smallest fish.	Remarks.
	No.	Lbs.	Lbs.	Lbs.	Lbs.			
Du Gouffre	4	60	15	24	7			
Murray								Not angled.
Ste. Marguerite, N.E. branch..	46	808	17 $\frac{1}{2}$	29	10			Water kept very low and clear.
do N.W. do ..	159	2,224 $\frac{1}{2}$	14	23	9			
A Mars	51	615 $\frac{1}{2}$	12 $\frac{1}{2}$	26	6			
Little Saguenay..								Not angled. More salmon than usual reported in the river.
Anse St. Jean....	8	102	12 $\frac{1}{2}$	16	10			Water kept very low.
Sault au Cochon..								Not angled.
Laval								do
Godbout.....	411	5,754	14	26	7			Three grilse, weighing 12 lbs.
Romaine								Not angled.
Mingan								do
Moisie	107	2,081	19 $\frac{1}{2}$	37	9			
St. John..								do
Natashquan	13	233	18	20	10			Angled by strangers, river being unlet.
Watsheeshoo								Not angled.
Washeecootai	1	12	12	12	12			
Rimouski	40	560	14	18	9			
Metis	41	846	20 $\frac{1}{2}$	35	11			
Matane.....	51	504	10	24	8			Water kept very low. Salmon increasing.
Little S. W. Bic.....	7	56	8	10	3 $\frac{1}{2}$			
Ste. Anne des Monts.....	76	1,407	18 $\frac{1}{2}$	47	10			
Magdalen	50	1,000	20	35	7			Five barrels of trout.
York.....	55	1,144	21	33	8			
St. John	55	688	12 $\frac{1}{2}$	22	9			
Dartmouth.....	64	854	13 $\frac{1}{3}$	29	7			About 75 salmon taken for breeding purposes.
Grand	92	1,241	13 $\frac{1}{2}$	27	6 $\frac{1}{2}$			Seven grilse.
Grand Pabos.....	10	160	16	20	8			
Little Pabos.....								Not angled.
Bonaventure	21	331 $\frac{1}{2}$	16	17	11 $\frac{1}{2}$			
Little Cascapedia.....	4	84	21	26	16			800 lbs. of trout.
Grand do	313	7,085	22 $\frac{1}{2}$	42	15			1 grilse.
Matapedia.....	202	4,344	21 $\frac{1}{2}$	37	8 $\frac{1}{2}$			55 do
Upsilonquitch	6	82	14	15	12			
Restigouche, Lower Division..	210	4,200	20	35	7			50 do
do Middle do ..	209	4,387	21	36	9			17 do
do Upper do ..	134	2,809	21	36	9			54 do
Jacquet.....	30	240	8	8	8			18 do
S.W. Miramichi.....	1	11	11	11	11			
Nipissiquit River.....	32	384	12	14	9			52 do
do Rough Waters.....	150	2,000	13	15	8			50 do
Total.....	2,653	46,307 $\frac{1}{2}$	17 $\frac{1}{2}$	47	6 $\frac{1}{2}$			

No. 8.

REPORT OF W. H. WYLDE, ESQ., INSPECTOR OF FISHERIES FOR
THE PROVINCE OF NOVA SCOTIA, FOR THE YEAR 1877.

PORT MULGRAVE, N. S. 31st December, 1877.

To the HON. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

SIR,---I have the honour to transmit herewith my second annual return of the yield and value of the fisheries of Nova Scotia for the year 1877, amounting to \$5,527,858.37.

This would show by the total figures a decrease of \$501,191.57, but we must first consider that the value of salmon has been reduced \$3.00 per brl. and haddock \$2.50 per cwt. and by adding the difference on those two articles, we have 950 $\frac{1}{2}$ brls. salmon @ \$3 per brl. equal to \$2,852.25, and 118,635 $\frac{1}{2}$ cwt. haddock @ \$2.50 per cwt. equal to \$296,588.75, making in all \$299,441. Taking this amount into account to make both years' returns at an equal valuation, it would make this year's returns only \$201,750.50 less than last year.

When we take into consideration the great falling off of many kinds of fish as per statement herewith annexed--See table appended.

The fisheries of Nova Scotia are still retaining their valuable position.

The decrease in catch is in salmon, herrings, alewives, cod, haddock, pollock halibut, shad, bass, trout smelt and eels.

There is an increase of 42,664 $\frac{1}{2}$ brls, and 94,216 cans mackerel, and it appears by the returns of the different counties that the increase is very equally divided.

The lobster-fishing shows a very large increase in catch, no less than 1,633,306 cans amounting to \$245,000. This increase in catch has been principally by an increased number of canning establishments and the improved demand abroad has caused more activity in each packing establishment.

I am sorry to notice such a large falling off in the returns of Shelburne County, amounting to no less than \$406,460.40. I hope there has not been any mistake made in the returns.

The trawl-fishing is causing quite an excitement among our fishermen, and they do not all agree, but all admit it would be useless to stop it within the three-mile limit, when both local and foreign vessels might anchor outside the three miles and could not be hindered. Unless the trawl-fishing could be abolished altogether it would be of little service to move in the matter.

About 10 per cent. of the whole value of fish caught are consumed in the Province, as near as can be ascertained by the statement of the overseers, but it is nearly impossible to get a correct statement, as many will not give the necessary information, fearing some ulterior motive is in view.

I herewith give a condensed statement from the reports of each of the overseers of the different counties. Many of them being practical men, I hope the suggestions put forth by them may be beneficial for the improvement of that most important industry--the fisheries.

TABLE showing the actual Increase and Decrease of Catch of the several Productions of the Fisheries, for the years 1876 and 1877.

Articles.		1876.	1877.	Less.	More.
Salmon.....	brls.	1,369 $\frac{1}{4}$	950 $\frac{1}{4}$	418 $\frac{1}{4}$	.....
do Fresh, in ice	lbs.	475,304	420,919	54,385	.....
do Smoked.....	"	30,118	17,910	12,208	.....
do Preserved.....	cans.	30,820	48,715	.....	17,895
Mackerel.....	bris.	70,964	113,638 $\frac{1}{2}$	.....	42,664 $\frac{1}{2}$
do Canned.....	cans.	30,820	125,036	.....	94,216
Herrings.....	bris.	165,142 $\frac{1}{2}$	113,098	52,044 $\frac{1}{2}$	.....
do Smoked.....	box.	51,310	28,780	22,530	.....
Alewives.....	bris.	7,611	5,433	2,178	.....
Cod.....	'cwt.	509,968	469,725	40,240	.....
Cod Tongues and Sounds.....	bris.	868	905	.....	37
Pollock.....	cwt.	34,852	33,820	1,032	.....
Hake.....	"	25,955	29,435 $\frac{1}{2}$	.....	3,480 $\frac{1}{2}$
Haddock.....	"	136,792	118,635	18,057	.....
Halibut.....	lbs.	941,200	668,060	273,140	.....
Shad.....	bris.	5,577 $\frac{1}{2}$	4,536	1,041 $\frac{1}{2}$	.....
Bass.....	lbs.	8,055	1,275	6,780	.....
Trout.....	"	77,940	65,645	12,295	.....
Smelt.....	"	431,625	313,302	118,323	.....
Eels.....	bris.	1,723	1,501	222	.....
Oysters.....	"	1,010	980	30	.....
Lobsters.....	cans.	3,348,720	4,982,026	.....	1,633,306
Fish Oil.....	gals.	345,674	337,170	8,504	.....
Fish Guano.....	tons.	1,383 $\frac{1}{2}$	531	852 $\frac{1}{2}$	.....
Fish Manure.....	brls.	3,291	9,779	.....	6,488

COMPARATIVE STATEMENT of Value of Fisheries in each County, for the years 1876 and 1877.

Counties.	1876.	1877.	Increase.	Decrease.
			\$ cts.	\$ cts.
Annapolis.....	131,426 40	78,055 50	.....	53,370 90
Antigonish.....	84,133 00	63,129 00	.....	21,004 00
Cumberland.....	72,249 85	60,614 75	.....	11,635 10
Colchester.....	26,569 50	30,770 50	5,201 00	.....
Cape Breton.....	263,002 05	191,127 80	.....	71,874 25
Digby.....	354,729 25	282,704 90	.....	72,024 35
Guy'sboro'.....	463,741 15	474,011 55	10,270 40	.....
Halifax.....	798,162 58	819,943 10	21,780 52	.....
Hants.....	8,886 95	5,624 20	.....	3,262 75
Inverness.....	303,602 00	358,906 72	55,304 72	.....
Kings.....	53,796 25	65,075 50	11,279 25	.....
Lunenburg.....	859,572 35	952,860 00	93,287 65	.....
Pictou.....	19,115 56	23,643 10	4,527 54	.....
Queens.....	211,332 75	228,993 80	17,600 05	.....
Richmond.....	600,164 40	545,863 75	.....	54,300 65
Saint John.....	1,055,837 25	649,376 85	.....	406,460 40
Victoria.....	169,210 60	158,861 85	.....	10,348 75
Yarmouth.....	554,518 05	538,295 50	.....	16,222 55
	\$6,029,049 94	\$5,527,858 37		

ANNAPOLIS COUNTY.

W. T. CARTY, Overseer.

There has been a great falling off in the catch of fish from the previous season, more particularly in the Bay of Fundy. This, the fishermen attribute to the great amount of trawls set across the mouth of the Bay, and I am informed by responsible men, that American vessels and others who have taken good fares of fish at the mouth of the Bay, and have come on shore for bait, had not a barrel of offal on board. It is generally thrown overboard on the banks.

The principal abuses that exists in the county, is the letting of sawdust and other rubbish into the streams, and poaching in the night; and since the wardens are not entitled to receive half the fine, it is very difficult to catch and convict the guilty.

I beg to say that the dam on Annapolis River, called the Lawrencetown Dam, is one of the greatest nuisances in the county. The shad fishery is almost destroyed, and the salmon are hindered going up when the water is low, and remain in the pool under or near the dam, and become an early prey to poachers.

The close-season, so far as my knowledge goes, has been observed.

There are ten fish-ways in this district; four on the Nictaux are out of repair. I have not taken any steps to have them repaired, as I waited for instructions. The fishway at Round Hill stream is too near the mill. I would recommend the closing of one, and putting one in the east waters, as the salmon have taken that route for several years.

I would further recommend that the inhabitants who live near fresh waters, where salmon and shad frequent, be allowed to set nets three days in each week.

Overseer Alex. W. McDonald, having had all his papers destroyed by fire, has not sent any report.

CAPE BRETON.

YORK BARRINGTON, Overseer.

The fisheries have been carried on later this season than usual, and less fish have been taken in the month of November this year than for several years, which is partly owing to the very high winds and scarcity of bait in the early part of the season.

The summer herring did not strike the shore for the whole season, and the catch was insufficient for the home consumption.

All close seasons have been strictly observed. There are some fish-ways in my district, all at present in good order. Some were damaged last winter, but I had them repaired.

There has been a decided decrease in all kinds of fish the past season.

FRANCIS QUINAN, Overseer.

Our fishery catch has decreased materially from previous years, more especially in the catch of salmon, codfish and herring.

The fisheries have been prosecuted with vigour, but the general opinion prevails that salmon and herring were driven from our shores during the high winds which prevailed during the time they were coming on our coast, and caused a partial failure. The decrease in codfishery is admitted by our fishermen to two causes. First; the throwing overboard of fish offal on the banks, which keep the fish off. Second; trawling on the banks, and inshore, more especially the former, tends to destroy the mother fish; and the general opinion among the fisherman is, trawling should be prohibited.

The close-seasons have been pretty closely observed, with the exception of one case a salmon net was seized, and one case of infringement in the trout close-season, in which a fine was imposed and received.

I am happy to report the fish-ladders in my district in good order.

The lobster-fishing is increasing yearly in my district, but the canning establishment being in Main-adieu district, I am unable to give the quantity canned.

In regard to the fish used locally, about one-half of the salmon, codfish and haddock are consumed at home.

From close observation, I find that many of our brooks are completely choked by wind-falls, old timber, etc., which prevents the fish ascending and descending, and young alewives are frequently killed by being caught in the debris. I had one brook cleaned, but only partially.

I most earnestly request a close-season be made for smelt, in this district, from 1st April to 30th June.

ALEX. McDONALD, Overseer.

There is a great falling off in the principal part of the fisheries, in this district, this season, owing to their scarcity.

First, in the catch of codfish and haddock; although the industry and energy of our fisherman added thirty-six boats and two schooners to that fleet, the catch is below that of last year.

The catch of mackerel and alewives is comparatively low. The oldest fishermen on our shores cannot tell why mackerel do not resort to our shores as formerly, although they seem plenty out at sea in the spring season.

About one-half of the quantity of mackerel shewn on my return are caught by hooks, and very little done by net-fishing either in spring or fall.

As regards the falling off in herrings, I attribute to a north-west gale on 20th June, that being the time the herring approached our shores.

There is a slight falling off in the catch of salmon, although the number of vessels shew less in the returns on account of the low market. There is an increase in the number of cans put up, and also in fresh salmon sold. The fishermen might have done better had they set their nets earlier in the season. The month of April was uncommonly fine in this county, but they did not set their nets until the usual time.

There is an increase in the number of cans from the factory. The lobster factory at Main-adieu was in operation before and after the close-season. But the factory at Gabarus was not in operation until after the close-season.

There is a large quantity of fish caught in this district that do not shew in my return, by fishermen from other counties of the Province, and return home to sell their fish after six or seven weeks' fishing in the spring season.

There were about forty schooners from other counties fishing in this county.

The close-season is well observed in this district. The only grievance is against trawl-fishing; therefore, for the protection of fisheries I would recommend that trawl-fishing be abolished hereafter.

COLCHESTER.

R. J. POLLOCK, Overseer.

Smelt came in the river the 22nd April very plenty, and went two miles further than they have done for many years; and owing to the river being unusually low, were caught in large quantities with dip-nets; no attempt has been made to take them in any other way.

The first shad was caught on the 10th May, and in larger quantities than usual up to the 20th May. This I believe to be owing to the water being low in the river, and gave the fish a free run to their spawning ground.

Trout were plenty; sportsmen well satisfied; first salmon caught, 1st June, but continued scarce until the 1st July. From this date until the close-season, salmon continued to be caught in about the usual quantities. After the close-season they appeared to be very plenty in all parts of the river in my district, and I have good reason to believe they got safely up to their spawning ground.

From the 1st to the 15th of May large quantities of salmon fry could be seen going down the river from four to six miles. The spent salmon are sometimes caught in the shad nets, and are very poor, and are in most cases allowed to go free.

Fish, of all kinds, I believe to be on the increase; the increase or decrease of the catch depends upon the height of the water in the rivers, for when they are high they get past without being taken; nearly all the fish caught are used in the county.

WM. BLAIR, *Overseer.*

The salmon are on the increase in our rivers and bays. There are not so many taken in my district as in former years, on account of the restrictions placed upon them in the Shubenacadie River.

The parties living on the banks of the river complain bitterly of being compelled to row from five to ten miles out into the bay before they are allowed to drop their nets, when from the time of the settling of the county they were allowed to catch for their own use fish in the river; and they claim it as a right inherited from their fathers.

If they could be allowed to fish one or two days in the week they would be satisfied.

The close-season has been strictly observed, but it is next to impossible to keep the sawdust out of the river from upright saws; some owners declare that they will shut down their mills if they are compelled to catch all the sawdust from their small upright saws.

The shad appear to be on the decrease from some cause; many say the young fry are killed in the weirs.

I have no fines to report, and I have good reason to believe that very little poaching has been carried on. The lessons of a few seasons ago have had their effect for good. We are having some difficulty with the proprietors of a steam mill near Truro, but hope to be able to place the matter right soon.

JAMES BONYMAN, *Overseer.*

The spawning season for salmon good; plenty of water to let them up to good spawning ground and to protect them from much damage from the spear. But on account of the depth of the water we could not tell if many spawned. Messrs. Burnham & Morrill (an American Co.,) built a lobster canning factory, and for six or seven weeks did a good business, and intend starting in the spring with the hope of doing a good business. They employed about seventeen hands, and as it is the first canning establishment in this district, the people regard it with a great deal of interest.

CUMBERLAND.

JAMES KING, *Overseer.*

The fishing at the head of the Bay has been as good as last season with a gradual increase in salmon; this is owing to the improved facilities for salmon to get up the river to spawn, and the prevention of injurious substances being put into the rivers.

Herrings have been as plentiful as last season, yet the people did not fish for them to any extent, except in two weirs. Line fish have been on the increase for a few years past, so much so that trawling commenced last season. This season a vessel and several boats came on this shore with very long trawls, which hindered our fishermen from fishing with any amount of energy; so the catch by our people was small.

I would suggest that some action be taken by the Department in reference to trawling on the western shores of this county, as the people that use trawls come from other parts and set their trawls on the spot where our men fished with lines.

This causes ill-feeling, so much so that our men cut their trawls and let them go adrift.. This may lead to more violence. The Basin of Mines is supposed to be where the line fish spawn; the trawls take the mother fish that come in to spawn.

The close season has been generally observed, with some exceptions; Southampton being the principal. I would suggest the propriety of appointing a Warden at Apple River with shore jurisdiction from Spencer's Island to Sand River. There are fourteen ways provided for fish to ascend the rivers, some are ladders and some are ways round dams. The most important ways are in efficient working order; those of less importance, some were out of repair. I have visited all of them during the first part of October and gave directions to the wardens to have them repaired sufficient to pass the fish. October and November are the months that the principal part of the fish enter the rivers to spawn; there are places yet requiring ways for fish to get to spawning ground. The parties at Apple River have agreed to provide a good way for fish next season when they erect their new works. This river was formerly a good place for fish to spawn.

HUGH DAVIDSON, *Overseer.*

The herring-fishing was unusually good last spring, large quantities might have been caught; there were no more taken than was required for home consumption.

There was a fish-way put in the dam at the head of the tide on the Tidnish River, which I trust will be the means of increasing the alewives in that river.

The lobster factorys at Tidnish and Amherst shore have done a fair business as they were carried on at a moderate expense.

I. J. HINGLEY, *Overseer.*

There seems to be a falling off in the catch of herrings in some places along the Gulf shore. The ice came during fishing and remained for three weeks. James Brander informs me that he has fished for fifty-two springs and that he never saw such a bad time to fish or caught so few herrings.

The greatest abuse in this district has always been the illegal taking of salmon, but I am glad to report that there is a great deal less of it now than formerly.

William Miller and Timothy Patten were engaged as special guardians, and they succeeded in doing good work; they took eight nets that were used for taking salmon. The close-season for other fish has been well observed; there are ten fish-ways in this district, and all are in good repair, except the one on the dam in Oxford, the freshet in August wrecked it and the water kept high so long that there was no opportunity to repair it; and as A. B. Wilmot, fishing officer at Bedford, required all the salmon for spawning purposes, that he could obtain, it made no difference materially.

All the fish taken in this district are used for home consumption, excepting lobsters.

DIGBY.

H. E. PAYSON, *Overseer.*

You will observe that there is quite a falling off in our returns from the year 1876.

The codfish and herring have been much less. Bait very scarce, and the nets being set week in and out has a tendency to keep the bait from the shore.

The trawling and trapping has injured the codfishery, and should be prohibited.

The catching of hake, and saving hake sounds, has got to be quite a business. One man bought over \$6,000 worth this season, which has been very profitable to our fishermen.

L. A. MELANCON, *Overseer.*

Although our fishermen were better prepared for fishing this year, the catch is less in proportion to the men engaged.

The failing is owing to the free use of trawls and throwing of offal of fish overboard.

The fish-ways are all in good order, but I think might be improved on when you visit us next season.

J. H. MOREHOUSE, *Overseer.*

I regret to report a considerable diminution in the amount of fish taken this season as compared with the last. The high prices realized last year induced a much larger venture in the business this season, the tonnage employed being almost doubled; as a consequence, the individual shares are reduced to less than half of last year. Besides the inferior quality of a large proportion of the fish taken, and the extremely low prices realized, will, I fear, cause great financial difficulty.

It may not be easy to trace, with positive certainty, the causes that have led to this result, but the belief is general that it is largely due to the practice of trawl-fishing; as a consequence, there exists a general prejudice against the system, and the fishermen are extremely anxious to have a law prohibiting the practice, at least in Digby County.

The waters of St. Mary's Bay are in many places shallow, and in heavy gales the bottom is powerfully agitated. In a recent storm, thousands of fish were washed ashore at a station where the inhabitants were fishing with trawls, thus, fully illustrating the destructive nature of this system, and fully proving the fact that the amount taken is small compared to the immense quantities killed on the bottom. It is not difficult to comprehend the deleterious effect of large quantities of decaying fish on fishing grounds.

Several fine cod-fishing banks in the Bay of Fundy are now abandoned, which, without doubt, have been destroyed in this way.

If this system is prohibited, doubtless these grounds will be restocked; but if continued we may as well bid farewell to the Bay of Fundy fisheries. There are also, doubtless, other causes operating to produce these effects; such as the destruction of our river and herring-fisheries. Formerly our rivers and harbours teemed with trout and other small fish; but as these have been depleted, there has been less to attract the deep-sea fish to our bays and estuaries.

I have good reason to believe that section 14 of the Fisheries Act continues to be violated by many of the fishermen; and, under the present law, it is hard to prevent it.

I regret being again compelled to record the partial failure of the mackerel fishery at St. Mary's Bay. The fish, though abundant, were so very small that they were unfit for market; consequently few were taken; but I am hopeful another year will witness the complete restoration of the fishery. I would also again respectfully request an order restricting the building of weirs at the head of St. Mary's Bay, until after the 20th of June, that the spring shad may be protected while depositing their spawn. I conceive no argument is necessary to show the unreasonableness of making a close season for the protection of this valuable fish, for I am fully convinced that unless this is done, they will be hopelessly destroyed.

I also regret being compelled to record the continued failure of our much celebrated Digby herring fisheries, caused, it is believed, by the sawdust coming down the Bear River, which has its outlet in Digby Basin. Hitherto I have had little sympathy in my efforts to protect these important interests; but there is at present a disposition manifested to assist in enforcing the law, so that in time we may see this fishing restored, and be able to prevent the destruction of Bear River and harbour which are slowly, yet surely, filling up.

As reported last year, there are not any fish-ways upon it, while the fish in their season continue their fruitless efforts to force their way to their spawning grounds.

It is pleasing, however, to observe that the spirit of enterprise in this branch of

industry has not abated, notwithstanding recent reverses. Vessels of larger dimensions and superior build, suited to bank-fishing are now superseding the fishings smacks of former days. Digby, the shire-town, is leading off finely in this direction, having doubled the number of their fleet the past year, while the little town of Hillsburgh is emulating her older sister. Three vessels were put in the business here last season, and three more are to be built this winter; nor is this spirit confined to these localities; all over the district the same energy is observable.

GUYSBOROUGH.

JAMES TORY, Overseer.

On comparison with last year, you will perceive a considerable falling off in herring, alewives, codfish, pollock, hake and oil; but an increase in mackerel, haddock, halibut and lobsters; making a difference in total value of \$28,674 less than last year. This I think may be attributed to several causes and chief among them is the fact that the fall herrings, which have heretofore been taken in large quantities at their spawning season, did not strike upon their usual spawning ground, and in consequence were missed by the fishermen. I am under the impression that this fact may, in a great measure, be owing to the setting of large quantities of nets on said grounds, and thereby breaking up or disturbing the school of fish while spawning. Another, and a secondary cause, may be owing to adverse winds and currents affecting them while approaching their customary haunts. In fact a very few of those fish were taken upon the shores of the district the past season, which caused a scarcity of bait for line-fishing. This will account for the short catch of cod, and other line-fish, which principally feed upon the herring. The short catch of line-fish will account for the deficiency in oil.

The catch of salmon and alewives has been about the same as the past year in this district, but has not been as successful with those that fished abroad.

Mackerel has largely outstretched the past year, but is far short of previous years, although the quality and price of those taken will in a great measure compensate for the deficiency of the catch in other fish.

The haddock-fishery this season has been prosecuted to a very great extent by trawls, which has nearly superseded the old mode of hand-line fishing, which will account for the increase of their catch.

The catch of lobsters as you will perceive is still on the increase. The fact of an additional canning establishment having been erected, and a sharper competition with increased facilities for the prosecuting of the fishery by the owners of the several establishments, which no doubt has been prompted on by the steady market abroad, will I think account for such increase. But I cannot help thinking that such an enormous drain as is now upon that fishery, will soon, if continued, bring it to an end, and I would again raise a warning voice against the total destruction of so lucrative a fishery, and ask that more stringent measures be adopted for its protection.

The other or minor fisheries have been about the same as previous years.

From personal observation and from all the information I have obtained I am under the impression that those fish which resort to the fresh water are steadily on the increase, especially salmon and trout.

I am happy to inform you that the close-season has been strictly kept, and that no violations in other respects have come to my knowledge during the season, although I have had considerable trouble in settling disputes respecting salmon net mooring, which I hope has been done satisfactorily to all parties concerned, without the necessity of appealing to law for such purpose.

There are not many mill dams in the district which are injurious to the fisheries, although a few may be to a small extent; and in this respect I would name one on the south-west branch of Salmon River, the fish-way on which has been carried away.

During Mr. Rogers' visit to the district, I got him to visit this dam with others. He gave orders to the owners to prepare materials to build a new one the coming season, which no doubt will be done. There is also a dam and a waterfall on the south branch of the river, at the Intervale (known as Hughes' Brook), which if proper fish-ways were erected, would open up a large string of lakes in the wilderness for the resort of fish. This I think is required, whenever it can be conveniently done, as it has now become pretty certain that fish will not resort to, or remain in small rivers after the forest has been cut away, and the waters thereof become unsheltered and exposed to the heat of the sun.

JOHN MACDANIEL, *Overseer.*

The decrease in the prosecution of the fisheries in this district may be attributed to several causes.

1st.—Many of those who were previously engaged in fishing have turned their attention to the more remunerative employment of gold-mining.

2nd.—The decrease in the value of fish and the scarcity of bait, the past season, have been the means of diverting their energy to something else. Herrings have been scarce all the season, and hence the small catch of codfish and haddock.

3rd.—The dams on the rivers prevent the free access of salmon and alewives, and many of the fish-ways are ill-calculated to allow the fish to pass. The most of them have been constructed merely for the purpose of avoiding the charge of openly violating the law.

The close-season has been strictly observed in this district.

HANTS.

TIMOTHY O'BRIEN, *Overseer.*

I am sorry to say my report differs very little from last year. There has been a falling off in the catch. There was about the same number of boats engaged this season as the past. The sole cause, I believe, is the scarcity of fish.

The use of weirs is, I fear, the cause in a great measure, and I must again recommend them to be prohibited altogether in our county or the owners be compelled to put a piece of net in the centre of each, and thus allow the small fish to escape.

Some complain very much of the sawdust being allowed to go into the stream. I have had to look very closely in order to enforce obedience.

The several close-seasons have been observed. I think the fish have had a fair chance of ascending the Shubenacadie River, as I examined it and removed all the obstructions I could find.

HALIFAX.

JOHN FITZGERALD, *Overseer.*

In the catch of mackerel there has been a large increase over that of last year but the catch of cod has not been much in excess. In other kinds of fish the catch has been an average one, with the exception of herring and salmon, the former being exceedingly scarce. In August about twenty thousand barrels of mackerel were lost to our fishermen, owing to a severe gale from the south-east, which compelled them to take up their seines and let the fish go.

With the exception of the disputes between the fishermen of Dover and Prospect already known to the Department, no other infringements upon the regulations or disagreement among them have come under my notice. Our fishing industry is prosecuted with much harmony and good temper, a circumstance perhaps remarkable where so many pursue the occupation.

Being under the impression that the nets with bottoms in them used by the fishermen of Margaret's Bay and Prospect were trap nets, I have during the past two-

years made them discontinue the use of them. They contend they are not trap nets, as the fish can, after getting in, find their way out; and besides, that the mesh is so large (a material difference between them and the real trap nets) that no small fish are destroyed, and moreover that no other fish than salmon are ever caught in them.

The lobster factories closed in the month of August.

I have been informed by Warden Mason that he never saw so many small salmon around Margaret's Bay as this fall; and Mr. Coolen, of Shad Bay, told me that one day while watching his mackerel seine, he saw about two hundred small salmon swimming under his boat. This was at the outlet of the Nine Mile River.

There are seven fish-ways in my district, two on each of the following rivers, viz:—Hosear, Indian and Ingraham Rivers, and one in Hubbard's River, all of which are in excellent order with the exception of the latter, which, as I have been told by Warden McLean, was not in condition to allow the fish to pass up.

The migratory habits of different kinds of fish are apparent from the fact that eight years ago dog-fish were so numerous in our waters, that two men could catch a sufficient number in a day to yield a barrel of oil, when now scarcely one is seen. A few years ago hake were very largely caught; a man could make his two to four quintals a day. Last year there were scarcely any caught, but this year they have been slightly on the increase.

Pennet River, an excellent one for alewives and salmon, being now in good condition, would be an excellent place for depositing young salmon fry.

The alewives are on the increase in Ketch Harbour Brook every year since its being cleared out.

Small mackerel have been exceedingly numerous in all the bays, creeks, and harbours along our coast this season.

An increased vigour seems every year to characterise the energy with which our fishermen prosecute their very important calling.

W.M. ANDERSON, Overseer.

With my returns I forward the petition of D. W. Archibald, Esq., setting forth a claim for compensation for rebuilding his fish-way on West River, Sheet Harbour. The old fish-way had been examined and passed, as he said, by all my predecessors, but I proved to him that it did not answer its intended purpose. I strongly recommend his claim as just, and trust the Department will remit him at least one-half the amount it cost. I trust you will report favourably, as I explained the case to you on a former occasion. I have urged the Department, and again through you do strongly recommend that something be done in this river to allow fish to ascend at any size of water. There are several reefs running across the river, spreading the stream and breaking the water, so that fish cannot ascend only in certain heights of water. Meantime, there are pools below each of those reefs where salmon lay, and poachers watch the movements of the warden, who has often to expose himself to danger and insult, as the poachers are regularly organized for that purpose, and often disguised and in the darkness of night cannot be recognised.

This is the best stream in the county of Halifax for salmon.

As there are mills on East River, between the steepness of the fish-way, which is cut through the rock, and the continued jam of logs and tampering with the regulating gates on said fish-way, few of any kind of fish ascend this river, which throws the whole run of fish into West River.

I have recommended in my former reports the improving of this stream. The cost would not exceed two hundred dollars.

The Chezzetcook River has no mills or dams, but the water spreads so among loose rocks at its mouth or entrance into the tide, that it is only at certain heights of water that fish can take this river. It is a good river for both salmon and gasper-eaux. Fifty dollars would make a good entrance.

The fish-way at Musquodoboit Harbour has proved to be what was required. We caught in a trap, which was placed in the dam above the fish-way, 200 salmon for the

Breeding Establishment at Bedford, where they were rightly handled by Mr. Wilmot, and the eggs forwarded in good condition to their destination.

The close-season for lobsters is giving general satisfaction, and the work of catching was better attended to. The fall herring and mackerel were a failure.

One of the great grievances now is trawl-fishing. I have not met a man—even those who are using them—but has urged me to report strongly against them. They all say it is ruining our inshore line-fishing. They also complain of trap-nets, such as are used in the western part of the Province, and trap-seines, used by the Americans in deep waters, and say that these modes of fishing break the schools, and cause the fish to leave our shores.

A number of poor people, residing at Moser's River, Sheet Harbour, Ship Harbour, and Musquodoboit River, have requested me to ask for the privilege of two days out of the week to dip alewives for the use of their families. If such privilege is given, I will see that it is not abused.

INVERNESS.

MR. A. Ross, Overseer.

The cod-fishery has been good, although the returns show a falling off of 2,165 quintals; but I feel satisfied that this many or more have been sold to trading vessels, of which I get no account.

Mackerel have been very plentiful, showing an increase of 3,302 barrels over last year's catch; the most of them have been sold to traders from Prince Edward Island, who shipped them to the United States.

The herring-fishery has been nearly a total failure, showing a decrease of 1,127 barrels from last year. The cause is attributed to a heavy gale of wind at the time they struck the coast.

Hake and haddock rather short of last year. Fish-oil shows an increase of 11,219 gallons over last year, which is attributed to two reasons, viz., the fish livers gave more oil, and a more correct statement is given than last year.

Salmon has been very plentiful, more so than I can recollect of. The cannery establishment at Margaree has done well, but no doubt Overseer Coady will give the number of cans. But plentiful as they were, for some unaccountable reason, they did not ascend the Margaree River until the first of September; consequently, the sportsmen did nothing. The river was well stocked with fall schools, and they no doubt found their way to spawning grounds.

I am sorry to admit that more salmon have been taken this year contrary to law than for the past eight years, and the question is: who is to blame. My opinion is the wardens are not placed in the proper places, as may be seen in the place where I live—there are two wardens within half a mile of each other, then a space of eight miles to the next staff, where two more are appointed within a mile of each other. Then there are six miles to the Forks without any. Again, there is another warden appointed on Lake O'Law, who is not in a position to be of any service to the protection of fish.

I hope that steps will be taken to remedy the evil, and that the different sections on this river will be equally represented, and that no officer will be drawing pay without being in a position to earn it, little as it is.

Little River Cheticamp, is the next to Margaree River for salmon-fishing; it is really a beautiful stream running back about twenty miles, where angling could be done on a large scale. There are three natural falls that prevent the fish from going to the head waters for spawning, unless an unusual freshet should happen when the salmon and trout are ascending the river. A small sum would blast a channel in the falls, and no doubt would make it equal if not superior to Margaree River.

This River empties into the sea and forms a large pond, and during heavy southerly winds the channel shuts up with sand, making it impossible for any kind

of fish to come in or out. I think twenty-five dollars would open it and have it attended all the season, and I hope the Department will see the necessity of granting the money.

The alewife-fishery has been a total failure, but I am informed that heavy schools were seen coming down the river from Lake Ainslie. I have good reason to hope for them to be as plentiful as formerly. It will require another warden appointed to assist Warden Neil McKay, as he has signified his intention of resigning if some person is not appointed to assist him, as he cannot attend to it alone. It is one of the worst places in this county to protect, as all the poaching is done at night.

The other wardens under my supervision are attentive to their duty. There are no fish-ways in my district.

The several close-seasons have been well observed.

JOHN CAMERON, Overseer.

I beg to send you my annual report of fisheries. I find herrings more abundant in my district.

The storm of the 22nd of September caused considerable damage to both nets and boats, and drove the fish away from our shores.

I find both haddock and cod on the decrease, and the reason is from less prosecution of that fishery.

The abuses that exist in my district are violations of the Fisheries Act, in setting nets across the rivers, and I would recommend that more wardens be appointed, so as to have the law better enforced.

There is only one fish-way in my district, and it has been left open during the season.

One of the best fishing rivers at Whycocomah is very much obstructed by three large piles of rubbish. I am desirous that some measures will be taken to clear it out.

During absence on official business two of the nets which I seized last fall were stolen from me. I suspect a labouring man whom I left to work at home.

KINGS.

A. BISHOP, Overseer.

I am this year compelled to state that the catch of salmon in Gaspereaux River is very trifling, compared with that of last year. In reference to the cause, I think they do not ascend the new fish-way over the Calder dam in sufficient quantities to keep up the fishery. Although this fish-way is the best one we have had there, and last year many alewives ascended, for vast quantities came and were blocked below the dam, but this year very few came, and none have been seen above the fish-way.

I am of opinion that the alewives we have taken the last two or three years, are the proceeds of those which ascended to their spawning-beds before the river became thus blocked, and especially those which ascended the year in which the Calder dam was torn out by the freshets.

As these fish will not return until they are three years old, we hope to have some returns in 1879, from those which ascended last year.

The scarcity of salmon in the Cornwallis River I think to be owing to the unusual dry seasons, both this year and last, keeping the river so low that they would not ascend it.

There are in my district four fish ways, two of which are ladders built over dams, and two are passages dug in the earth around dams, all of these have been kept open during the season; the last two mentioned work well and give perfect satisfaction. One of the others was slightly injured, but was duly repaired.

Our people are nearly all disposed to respect the law, and with a little moral suasion, I generally succeed in settling all disputes and preventing illegal fishing; I have therefore no fines to remit.

J. E. STARR, *Overseer.*

I enclose herewith an account of fish caught in the coast fisheries of this county the past year, amounting in value to the sum of sixty-four thousand three hundred and ninety-nine dollars and fifty cents, being an increase of ten thousand six hundred dollars over and above that of last year, and the increase has been steady and gradual ever since 1869, when only half the present quantity was reported. Of course some of this may be accredited to more correct returns, but very largely to more persevering efforts on the part of the fishermen, who have been encouraged by good wholesome laws, properly enforced, preventing contention.

The herring-fishery has not been as good this year as last, but quite a number of mackerel have been taken, more than making up the deficiency. Line-fishery has been more generally followed this year, and in some instances with very fair success. Some of the fishermen complain of trawl-fishing, but I cannot at present see the way clear to any regulation prohibiting it. I do not know of any alteration or addition to our present laws that would be practicable or desirable.

There are no fish-ladders in my district, nor have any violations of the law come to my notice, and from all the information I can obtain, I am satisfied that, since the unfortunate affray in which one man lost his life, there has been no attempt to drift for shad in Scott's Bay contrary to law.

LUNENBURG.

H. S. JOST, *Overseer.*

I now beg leave to present my report and annual return of fisheries for the Western District of the county of Lunenburg.

The value of the year's products in my district is \$780,551.00, being an increase over 1876 of \$139,955.25, \$19,500 of which excess is contributed by lobsters in cans, and the balance by a general increase, distributed among the remaining articles, with the exception of very few.

During the past season there has been one trap-net in operation in the district licensed by the Department. It was located near Fire Cove, on the south-west side of Lunenburg Bay, near the entrance of the harbour. The people living in the vicinity—not connected with it—seemed inclined, at first, to oppose its use, thinking it would injure their fishing. There can be no doubt, among those knowing the facts, that the trap was a great convenience, and very useful this year, in being the means by which herring and other fish were distributed fresh among the people of the surrounding country, as they had not been for years previously.

Bait also—which had been very scarce—was largely supplied from the trap, to the fishing boats, and also to some bank schooners.

All the fish-ladders are now in good order as I am informed by the wardens, and by my own personal observation.

Since the erection of the Gang Mills below with their dams extended across the river, there are neither salmon nor alewives to be seen, much less caught above.

The Gang Mill dams and their ladders have been looked after by Mr. Rogers, who has this year again caused some alterations and improvements, making them more efficient.

The very extensive lumbering, causing such a large amount of logging on the Lahave River, is no doubt the cause of much mischief to the fisheries.

GEORGE REDDEN, *Overseer.*

There is a falling off in the catch of fish of different kinds in this district this season. Herrings were very scarce, but the quantity brought from other localities helped to increase the amount.

There has been a decrease in hake, and all line-fish along our shores, owing to trawling, which destroys the mother-fish.

There is a large number of small streams which are closed against the alewives, still those fish visit the entrance to them every year, and if those streams continue closed, there will still be a greater decrease in the poor man's fish.

In my opinion it is caused by sawdust and mill-rubbish. I would recommend Coleback's Brook to be cleared out the coming season.

The close-seasons have been well observed; poaching has been of very rare occurrence in this district the past season. There are several fish-ways in this district, and have been attended to according to law.

The fish-way at Middle River Branch is not sufficient, and it is impossible to remedy it without putting the law in force against the mill-owners.

All other rivers are increasing in fish, and the inhabitants will respect the law, since they find the Department restocking the rivers.

PICTOU.

DAVID MARSHALL, *Overseer.*

It becomes my duty to report to you of the matters under my charge, as Fishery Overseer for West Pictou.

The usual statistical forms have been filled up as carefully as possible and forwarded with my accounts of expenditure and fines.

I cannot give a report of last year's suits appealed, as my attorney has not given me a statement. I fear little will be added to the revenue of the Department, but trust no demand will be necessary for costs.

What with new overseer, new laws, new judge, our legal efforts have not been successful, though I may say that a wholesome check has been given to law-breakers; they now know and fear. I will be able to report more fully after court.

The fish-ways on both East and Middle Rivers and on the River John, have been built under the personal attendance of our efficient fishery officer W. H. Rogers, Esq., and a great want is thereby supplied.

The presence of Mr. Rogers in the county, not only during the summer while building the fish-ways, but latterly during the fishing season, has had a good effect; people learn that the Inspector is in earnest in his efforts to have our rivers filled with fish.

There is a marked improvement in the number of fish in our rivers, which a few years' more care, and still more efficient inspection will be pleasing besides profitable.

The wardens are not equal to the duty to be performed, they have an average of ten miles to look after, and I think it is more than can be attended to properly, and if there should be any tardiness in any of them, the whole river must suffer.

I feel that the law can be enforced, as the respectable and influential portion of the community are in favour of it. The increase of fish as a result of partial enforcement, speaks loudly in favour of enforcement.

Two hundred and twenty-five dollars given for the wardens in this district, ought to go far to protect the fisheries for two months.

JOHN McDONALD, *Overseer.*

In reference to this year's fishing I have to state a large increase over last year in the catch of salmon, notwithstanding a serious drawback in the beginning of the best part of the season, by a severe storm that damaged nets then out. This favour-

able result is largely due to the enforcement of the fishery laws, thereby greatly increasing the number of salmon in our waters.

The state of the rivers the past season was quite favourable to fish ascending to their spawning grounds, as the summer was mildly wet, keeping the rivers in an even flow without the occurrence of rushing freshets to muddy the water and obstruct the fish by the accumulation of rubbish.

The close-season has been generally well observed on the coast, but in some of the rivers attempts were made to evade the law; the more so, as many strangers were in the district working on the Eastern Extension Railway. Against several parties I instituted proceedings, but failed to convict from want of sufficient evidence.

QUEENS.

S. T. N. SELLON, *Overseer.*

The fishing interest of this county has not been a success this season, a variety of adverse circumstances being the cause; the most important of which were strong winds, when the migratory fish would come into our bays, harbours and rivers at the season they come on the coast.

By this I mean that salmon and alewives are late and uncertain if the prevailing winds are from the eastward and cold.

Herring are taken in small quantities early in the spring, but they are more plentiful in July and August, when they come into our bays to deposit their spawn on sandy bottoms; at this time they are fat and good.

Trap-fishing was not successful this season, but they rendered much valuable service to bait fishermen, to our own and American vessels.

Lobster-fishing has resulted most favourably to that class of fishermen and the factories, and it will be largely extended next season.

Opinions differ regarding the close time for lobsters, but here it gives general satisfaction, and perhaps no better time could be named for their protection, and suit the varied interests of the people.

Very early in the spring, before the usual time for alewives, quite a school of them went up the rivers, but after that they were uncertain and few in number, adverse winds and weather being the cause.

Salmon were in good number on the Medway River; they came in early; several were taken by the Indians with rod and line among the floating ice in the last week of January and part of February, and we have reason to suppose a very large proportion goes up to the head waters, as there is no obstruction and a high run of water.

I regret to say salmon and alewives-fishing does not give me satisfaction. I anticipated a larger increase; all care is used, and the fish-ladders are called good, but our fish do not seem to go up them. I would recommend that fishing for salmon should be from Monday morning at 6 o'clock to Thursday afternoon at 6 o'clock. Our rivers are blocked up with nets, for there are so many who set them. Our present law allows the entire week for fishing.

On the Medway River there are four fish-passes from twenty to thirty feet wide, at the end of the large dams; these are most satisfactory and ample. From thence to Ponhooh are four fish-ladders, and one each at Brookfield, Pleasant and Westfield Rivers.

On the Liverpool River a fish-ladder was built according to a plan from the Department and was approved by Mr. Venning and fishery officers. At Tancook dam, a very fine ladder was built in 1875, pronounced good by the inspectors, but they do not seem to suit our fish. There is also a fish-hole at Cowie's dam; Broad River has three fish-ladders, and at Port Mouton Mills there are two.

Generally the fishery laws are respected by mill-owners, but the lobster fishermen will violate the law when they can.

The law for trap-fishing is so far satisfactory, and these stations require several visits during the fishing season.

I disapprove of trawl-fishing, and if it cannot be stopped on the outside banks it can be stopped in the harbours under Dominion control.

RICHMOND.

EDWARD H. BALLAM, Overseer.

I have to report as follows regarding the fishery district under my supervision. The returns this year show a falling off in the following:—Herring 6,000 barrels, cod 7,000 quintals, haddock 10,000 quintals, and lobsters 17,000 cans.

The fisheries have been prosecuted with more ardour this year than the past. Haddock did not seem to be less plentiful, but they would not take the bait from the hand-lines, owing to the vast number of trawls set in every direction, around twenty miles of coast.

There is a spot of ground in Arichat Harbour under Robins Cape, where haddock have resorted from time immemorial for the purpose of spawning, but this year the fish abandoned that spot and none were taken there, which is supposed to have been caused by trawling, and the only remedy that would apply would be to do away with this mode of catching haddock altogether.

I have had no information of any breach of the law with regard to the river fisheries in my district this year.

J. CAMERON, Overseer.

I am happy to report a large increase in the catch of fish this year over that of last. This gratifying result is owing to a more abundant supply of fish this season on the greater part of the coast, and to a more vigorous prosecution of the coast fishery; a greater number of vessels, boats, men, &c., having been employed than heretofore, which will be seen by reference to the statistical return forwarded herewith.

A slight falling off has taken place in a few of the several branches of this industry, while there has been a marked increase in others—notably, mackerel, cod, herring, and lobsters. I must say, however, that I do not believe the aggregate increase is really so great as one would infer from a comparison of the fishery statistics of this year and last. It is due, in a great measure, to the fact that I have been enabled this season to obtain more accurate information than usual.

I am satisfied that the Department cannot be too strongly impressed with the necessity of adopting such measures as will prevent the use of trawls in any manner in our fishing grounds. There can be no doubt that, besides destroying large numbers of fish, these appliances are speedily and surely driving the haddock and codfish from their usual haunts. No matter how vigilant fishery-warders may be, instances of daily occurrence escape their notice. When trawls are left in the water unattended, the fish which get caught on them die in a short time, and are shaken off the hooks; they then lie rotting on the bottom, and prevent the line-fish from remaining in such places. These are arguments advanced by fishermen, and one which appears to be confirmed by the fact that, when haddock arrived on the coast last season, they could be taken quite near the shore on their usual grounds, but began to move off into deep water as soon as the use of trawls was commenced.

I am not aware of any abuses existing in this district, other than the use of trawls, which I consider an abuse in reality.

There are no fish-ways under my supervision; and the close-seasons have been strictly observed.

The quantity of fish used for home consumption I estimate at 2,500 brls., and the value at \$10,000.

SHELBURNE.

SAMUEL MUIR, Overseer.

There is a decrease in the catch of all kinds of fish, as compared with that of last year. The decrease in mackerel is due to the strong north-east winds in the fishing season, which kept them out of the bays.

There has been a small catch of cod, pollock, and haddock; the most experienced fisherman is unable to account for it. Some think that trawl-fishing is the cause; no doubt it is injurious, but it would hardly account for so sudden a change. As compared with last year, there is about the same quantity of men engaged in the fishing as last season.

Herrings have been scarce, but I cannot give any particular cause for it. Some say fishing is injurious to them.

Salmon and alewives have been scarce this season, even in the rivers and brooks where there has never been any obstructions. There are six mill-dams on Shelburne River, all with good fish-ways. Mr. Rogers had a new fish-way built, according to the Government plan, at the lower mill-dam on the Shelburne River, which, I think, will prove to be all that is required, as the fish ascend it very easily.

A resident warden is much needed on the upper end of Shelburne River. I would recommend Robert Irwin, Ohio, as a suitable person. On one of my visits up Shelburne River, I found three eel-traps, with a quantity of small alewives in them, which I destroyed, but I could not find the owners of them. It is eighteen miles from the nearest warden to where those traps are set.

Mr. Rogers had a new fish-way built on Jordan River in the summer of 1876; and in the spring of 1877 the heavy rains and ice carried the mill-dam away, and the fish-way with it, and it was late this summer before the mill-owners commenced building a new dam. I had a fish-way partly built, when the heavy rains prevented me from finishing it, but will attend to it when the water is low enough. There are eighteen fish-ways in my district, all in good order at present, except Clyde River, which will require some attention next summer.

The several close-seasons have been well observed. Lobsters have been more plentiful than last season.

The quantity of fish used for home consumption is 4,000 barrels herring, and 4,000 quintals dry fish, chiefly pollock; total value, \$24,000.

VICTORIA

JOHN W. BURKE, Overseer.

You will find a large increase in all kinds of fish, especially the cod. The cod-fish this season is far before last; one reason is capelin struck in on our shores in abundance, and brought an immense lot of cod after them. The capelin had not struck before for ten years.

Net-fishing was very good also, but most of the mackerel were taken with the hook.

On account of not having any wardens at Ingonis, I took the liberty of hiring a man for each river of most importance, which proved satisfactory, to the benefit of the close season, as the intruders were disturbed—they for fear of loosing their nets—gave up the business. I paid each man, as will be seen in my diary. If the Government does not approve of my action I will bear the loss.

I would strongly recommend two wardens for Ingonis; one for Clyburn Brook and another for South Harbour Brooks. Should this meet your approbation, appoint Thomas Burns sen., for Clyburn Brook, and Donald McLeod for South Harbour Brook.

The entrance of Brook Cove was closed during the summer.

Our new harbour is now showing its benefit on the coast, as more than eighty different vessels found it a place of refuge.

YARMOUTH.

ENOS GARDNER, *Overseer.*

Hherewith please find return of fisheries, for the county of Yarmouth, lobster-for the year 1877, which shows an increase, over last year, of about twenty-four thousand dollars.

The haddock and lobsters being made up at a much reduced price, also makes considerable difference. There were twenty-two more vessels engaged in the fishing than last year, but the shore-fishing was not as good. Fish were as plentiful, but there was considerable bad weather, and the latter part of the fishing season, fresh bait was scarce; the most of them, however, have made saving voyages. The bank fishermen all made good trips. The mackerel-fishing in the county was good, and the largest quantity taken for many years past. This has helped largely in making up the total amount of the fishing industry more than it was last year, and the large catch is owing to the fishermen having licenses for trap-nets, which appear to be a sure way of catching mackerel, and in fact the only way they can be successfully and profitably taken. I visited these trap-nets during the fishing season, and my opinion is, that they are no injury to the other fisheries. The fish offal was generally carefully removed, and the fishing grounds were not injured in any way. There still exist some little prejudice from the net fishermen, but it is fast dying out, and most of the fishermen are joining in applications for licenses for trap-nets, of which there will be a large number put in next year.

The alewife-fishery on the rivers was a very poor one, and the salmon-fishing was very good. The freshet on the river has been good during the whole season, and the fish had a good passage and plenty of water out. Very large quantities of young fish have come down the river this autumn, and I trust next year to have a better report of the alewife-fishery on the rivers.

The close-seasons have only been well observed where the parties have been watched closely. They will not observe the law if they can avoid it.

The wardens generally have been vigilant, and I have personally given the river a good looking-after on the close-days. One person, for fishing on Sunday, was kept in close confinement in the jail at Tusket for twenty days, this had a good effect, and I think by rigidly enforcing the law when they are caught, that the close days will be better observed.

There are two fish ways in this county, one at Carleton, the other at the Gang-mill, Kemptonville; they were both put in under the direction of fishery officer, W. H. Rogers, Esq., and pronounced by him efficient. In my opinion they do not give a passage for fish that is required at these important places. On the 29th of May last, I was at the Carlton mill-dam, the ladder was in good repair, and large quantities of alewives were under the dam at foot of the ladder, and I could see no reason why they should not go up. I shut off the water from the ladder and found three alewives in the wing, about half-way up; in about half-an hour shut off the water again and found six alewives about the same distance up—in about a half hour I again shut it off and did not find a fish. The fish appear to come up under the dam, play awhile, and fall back into the lake, which is very near, and there they are mostly caught up with nets. Persons who live above the Carleton mill say there are very few fish get by and none of any consequence caught. I visited the gang mill in company with Mr. Rogers, 15th May last. He pronounced the ladder all right, and found one alewife dead half-way up in the ladder. There was not any quantity of fish in the river at that time, and it was not a good chance to know if any quantity would go up. I am informed by persons who live above the mill that no fish of any consequence get up, and the ladders have not been satisfactory to the public who are interested in the fishery. Mr. Rogers having had large experience in fish-ladders, and these being put in under his direction and pronounced by him all that is required, of course I could not give any suggestions that would likely make them more efficient.

There are two lobster factories in the county, one at Little River, the other at Lower Argyle. I have looked after them personally, and the law has been strictly observed, and the offal has been carefully removed and used as manure. The managers at these factories are well disposed and will do all in their power to see that the law and regulations are well observed.

GENERAL REMARKS.

It being my second year in office I intended making myself more thoroughly acquainted with every county, and on the 18th April I took the train for Annapolis County as I had not had the opportunity of visiting it before. There I found the fish-ways in a very unsatisfactory state, more especially on the Nictaux River, where they all required to be rebuilt. There is a good deal of complaint about the mill on the Annapolis River allowing the sawdust to fall into the river.

There are a great many opinions in reference to those up-right saws, and the almost impossibility of keeping the saw-dust or a large proportion of it from going into the flume; those opinions are too true, as they would have to be either differently built, or an officer to watch each mill while sawing as the removing of one board in each side of the shaft will allow nearly all to fall into the water, thereby saving what they think to be a great expense.

I travelled through Digby, Yarmouth, Queens, Shelburne and Lunenburg, and arrived in Halifax the 2nd May, and there received instructions from your Department that my services would be wholly required on the duties of the Fishery Commission.

My report of the 12th May, 1877, will, I think, show the state of the different counties visited and the improvements required.

Before assuming the duties of the Fishery Commission I addressed a letter to W. H. Rogers, Esq., fishery officer at Amherst to meet me and have a consultation in regard to his movements in attending to the duties requiring immediate attention the ensuing season; that being arranged I returned to Port Mulgrave, there to pick up whatever information might be beneficial to the Fishery Commission.

Since my appointment to office it has been my study to have both the river and coast fishery protected by good regulations, and in as far as my practical experience would dictate, have advised with the different officers under me and have introduced some regulations, which I hope may be a wholesome check to many, and a general good to all interested in the fisheries of Nova Scotia.

The general feeling is now to see the Fishery laws respected and obeyed, and in all my conversation in traveling I never met a man but what expressed his opinion fully that our river-fishery was improving.

My statement of fines this year, I am pleased to say, has decreased, which, in a manner, shows that the laws are complied with.

The report in reference to the fish ladders I will have to leave to W. H. Rogers, Esq., who had the superintendence of them the past season.

There is one matter I wish most respectfully to call the attention of the Department to, that is to make it imperative upon the Overseers to have their returns forwarded to the Inspector before the 10th of December, as the delay in forwarding them causes a great deal of trouble and delay in making up the statistical report as in a great many cases they have to be returned for correction. I did not receive some returns till the 20th January, 1878.

My whole time being occupied from 5th May to the 20th September on the Fishery Commission, I am unable to point out or refer to as many matters as I fully expected to do when I first made my tour in the spring; but I have had to report on a great deal of unfinished business that was left unsettled before I came into office, which I hope may be satisfactory and put an end to further applications.

There is another matter which I will more fully enter into when I take up the diary accounts to report upon.

First—The difference of pay and important work of some Overseers, and the travelling fees charged, comparing the different counties and the accounts rendered me.

Secondly—The importance of a revision and readjustment of the staff of wardens to have them placed in localities more suitable to guard the river fisheries.

It is pleasing to see the great improvements made in stocking the rivers by A. B. Wilmot, Esq., of Bedford Hatchery House, whose labours are indefatigable. He not only has 1,500,000 ova for that establishment, but has supplied the New Brunswick House with 200,000, and I hope, after a few years, we may see all our rivers partially re-stocked with this valuable fish.

It is to be hoped that the same steps may be [taken to improve the shad that have been getting scarcer every year.

I have the honour to be, Sir,
Your most obedient servant,

WM. HENRY WYLDE,
Inspector of Fisheries for Nova Scotia.

No. 9.

REPORT OF W. H. ROGERS, Esq., FISHERY OFFICER FOR NOVA SCOTIA,
ON THE STATE AND CONDITION OF FISHWAYS IN NOVA SCOTIA
DURING THE SEASON OF 1877.

AMHERST, N.S., 31st December, 1877.

Hon. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit the following Report and remarks upon the fisheries of Nova Scotia :—

Having, during the year 1876, personally superintended the erection of a number of new fishways in the western counties, I was naturally anxious to see for myself how they would work, and accordingly went to Yarmouth County during the early part of May, that I might be there when the alewives entered the river. The mill dams in this county being so far up the rivers, the fish are late in reaching them, and after waiting for two weeks I found that I would be too late for the fish in the more eastern counties if I remained in Yarmouth until the fish reached the ladders. I, therefore, was obliged to leave without seeing the fish ascend, but have since received letters informing me that they had gone up without any difficulty.

While in this county I seized a number of nets which I found set illegally. They were sold by Mr. Gardner. I also had a number of poachers fined, who I caught fishing during weekly close time, with blackened faces. I destroyed one man's boat, he having fled to the woods, and his face being blackened, could not be identified; however, his boat and implements were seized, and as I could not turn them into money they were destroyed. I think that it will be found the presence of a general officer during the fishing season was attended with much good, as poachers are generally more afraid of such than local officers, for strangers can come upon them when a person who they know could not, and local officers are often intimidated by local circumstances which a stranger does not care for.

SHELBOURNE COUNTY.

I found the fishway on the lower dam of the river Clyde out of repair, owing to a heavy freshet in the spring, and although it was a small job to repair it, neither the local officer, the owners of the mill, nor the inhabitants, took the trouble to have it done, although the fishing season was nearly through when I arrived there. I would have imposed a fine on the owners, but the concern was in bankruptcy, and I could not find out who would be responsible. I had the ladder repaired, when the fish went up quite readily. The old dam next above, which is the only other one on this fine river, has gone out, and will not be rebuilt, so that the lower one is the only obstruction on the whole river.

On the Roseway River, at Shelburne, I found the pass around the dam, made by the late overseer, Mr. Ryer, a total failure, as the water was too low in the river during the fishing season to supply enough for the fish to ascend, and this I have found, in my experience, to be most always the case with "by-waters" or "dug-ways" round the end of the dam. The wooden fishways are, when properly built, far superior, for many reasons, the most important being that they can and ought to be built so as to admit sufficient water whether the river or pond is high or low.

The people of Shelburne were considerably excited over the matter, for the river has heretofore always supplied alewives for bait for cod-fishermen, earlier than it could

be obtained anywhere else, but last year it was an entire failure. To remedy the evil they had determined to have one-third of the dam removed, and when they found that I was about to build a wooden fishway over the dam, a deputation of some thirty citizens arrived at the dam and were determined that I should take the dam down; this, of course, I refused to do, but informed them that I was going to send the fish up over the dam by means of a wooden ladder. This idea caused a good deal of merriment amongst the good citizens, as they, in their wisdom, had utterly condemned wooden ladders long ago, as they always had and always would be a failure, and the dam being fifteen feet high no fish could be got over it. I, however, proceeded with the work, amid sundry threats to tear it down as fast as I would build it. However, in due course it was finished, and the fish went over the dam as readily as if no dam had been there, which much astonished and delighted the people.

On the Jordan River, where I had last year built two new fishways; I found the people congregated at the foot of the ladder dipping the fish as they came up. I took their dip nets and destroyed them in their presence. The ladder, which proved to be a little too steep, I had regulated; the dam next above had been carried away by the spring freshet; the ladder, which also went, would be rebuilt during the summer. While in the county I caught and punished a number of poachers by seizing their nets, &c. I am compelled to say that the local officers in this county are by no means as vigilant as they ought to be, but they promise to do better.

QUEEN'S COUNTY.

The fishways in this county appear to work well, and needed no improvement. My stay here was therefore but short; Mr. Sellen, the indefatigable overseer of this county looks well after his duties, and the law is much more enforced here than in many other counties.

LUNENBURG COUNTY.

At Bridgewater I found the fishway out of repair, and, no fish in the river, as the season had passed, and the alewives had left before I got there. Messrs. Davidson & Son, with their usual liberality and promptness, supplied me with men and material, and I had all the fishways—two on the lower, and one on the upper dam, thoroughly repaired and improved, so that there can be no difficulty for any kind of migratory fish to ascend, though the dams are sixteen or seventeen feet high.

The great difficulty here is, that there is a settlement of Indians located at one end of the dam, who fish night and day with all sorts of appliances, Sunday and Monday, without let or hindrance, filling the fishways with rocks so that the fish cannot pass up. The warden either does not or cannot prevent them, hence the necessity of another officer to assist him. This is a most important matter, as the river can never improve while these Indians are allowed to kill all the fish. Mr. Jost, the overseer, lives twelve miles away, and cannot be often on the spot to look after them, still I think he ought to do more in that direction than he does.

There are some fishways on smaller streams in this county, which will, next year, require improving as well as some new ones to build.

HALIFAX COUNTY.

The fishways on the rivers at Margaret's Bay were in good condition, and working well, and the officers looking well after the fisheries. The alewife fishery at Ketch Harbor is steadily improving, as the result of opening the rivers or runs between the lakes in 1872.

I did not visit East Halifax during the past summer, and cannot, therefore, say anything as to the state of the fishways in that section, but no doubt Mr. Anderson will look after them and report to Mr. Wylde.

CUMBERLAND COUNTY.

A new fishway was put in a dam on the Tidnish River; also one on the Gasperaux River, at the head of Bay Verte. The fishways on the River Philip are out of order, and as all the fish that could be caught at Oxford were needed for the Bedford Hatching House, I did not think it necessary to have them repaired. At Wallace, the fishway on the lower dam has proved to be too steep for alewives, and since its construction an alteration in the dam has rendered it still more ineffectual; the owners promised to have it repaired last summer during my absence, but did not do so. I am not sorry for this, because it is most likely that it would have been improperly done, unless I was on the spot to give directions, which I find to be necessary in almost every instance. Next summer I shall see that this is done.

COLCHESTER COUNTY.

The fishway on Waugh's River allows the fish to pass up, but it will need some improvement next year. I spent a week or so at Tatamagouche last fall looking after poachers, and was out several nights in rain and cold, but succeeded in capturing several illegally set salmon nets, and also destroyed some boats in which we found fresh salmon and nets. There are some fishways in the western part of the county which will have to be rebuilt next year, as they never worked well.

PICTOU COUNTY.

The fishways in this county have been in a bad state for some time, but I had new ones built, one on Mr. Wier's dam, being the lower one on the River John; the next one above also would have been built, but the fall rains came on before it was finished, and raised the water so high that we were obliged to abandon it till next year.

On the East River a good fishway was put on Grant's dam, also one each on the two dams on the west branch of this river, these are all good fish-ways, and there will be no trouble for fish to go up. I also had the ladder on the dam of the Middle River repaired and improved. I constructed a good ladder on the dam at the Garden of Eden, on the west branch of the St. Mary's river, owned by Mr. Cameron. These ladders are all built on the most approved principles, and under my own personal inspection, and I will be responsible for their working all right.

Last fall I spent some eight or ten days and nights about the harbours and rivers of this county with a boat and crew of men, to the great annoyance of poachers in general. Several nets were seized and left with the officers.

There is a fall on the west branch of the St. Mary's river in this county which should be removed, as it obstructs the great body of alewives in their passage up to the dam, at the Garden of Eden, where I built the new fishway. Here the people gather and kill most of the fish. The expenditure of some twenty or thirty dollars would remove the difficulty, which can only be done in summer when the water is low. You remember I wrote you when at Halifax last summer, but before I received your reply the water had risen so high that nothing could be done until next year. I hope this matter will not be lost sight of as it is of great importance.

ANTIGONISH COUNTY.

I built a good fishway on John Fraser's dam on the South river, also one on McDonald's dam next below Fraser's, the only two obstructions on the river. There are several other dams requiring new fishways in this county which will have to be looked after next year.

GUYSBORO' COUNTY.

There are several new fishways needed in this county which will require our attention next summer. When I arrived there it was too late in the season to do anything on account of the streams being much swollen by the fall rains. I, however, personally, either in company with Mr. Wylde or Mr. Tory, visited all the dams in the County, and left bill of scantling and lumber with directions to be ready for next year.

KING'S COUNTY.

Mr. Bishop, the Overseer in this county, does not seem to have much confidence in wooden fishways, partaking of the popular prejudice, which is met with almost everywhere among the people who have had no experience. He seems to be determined to believe that while alewives ascend the fishway, that it is not sufficient for salmon. I do not think it will be necessary here to refute his fallacies in detail, as it is sufficient to say that he never saw but one or two fishways in his life, and being a local officer, and only coming in contact with the fisheries of his own district, he fancies that the falling off of the alewives in the Gaspeaux River is entirely owing to the mill-dam, while the same decrease has taken place all over the Dominion, and on rivers, such as the Tusket in Yarmouth, as well as others, where those obstructions do not exist. It is quite likely, I think, that he will be astonished at the abundance of alewives that will swarm the rivers next year, as there are influences effecting the movements of fish of all kinds, over which man can have no control, and which is beyond the reach of the wisest and most experienced to account for.

ANNAPOLIS COUNTY.

The fishways in this county are in a bad state, and will need rebuilding and repairing next summer.

ALEWIVE FISHERY.

It will be seen by consulting the fishing returns for the past three years that the catch of these fish has fallen from about 14,000 barrels in 1875, to 7,000 barrels in 1876, and 5,000 barrels in 1877. The shrinkage is not confined to any particular locality, nor can it be attributed to local causes such as mill dams or illegal fishing, because the same results are observable as well on rivers unobstructed as upon those overfished, or which are obstructed with dams, and besides, the dams have been better provided with fishways during the past nine years than ever before. I, therefore, conclude that there must be some cause for the uncertain movements of these fish beyond human ken. It may be that the haddock and dogfish, which have been more abundant than usual all around our coasts during the past three years, have devoured and frightened away these fish as well as the herring, which also shews a large falling off in the catch. Whatever may be the cause, one thing is certain, unless there is a change for the better very soon, this fishery bids fair to be annihilated.

There should be a weekly close time for this fish all over the Province as there is now in some counties. I would, therefore, recommend the passage of an Order in Council prohibiting the catch of alewives in Nova Scotia from Thursday evening at 6 o'clock until Monday morning at 6 o'clock, and that no fish be taken at any time within thirty yards of a fishway.

SMELT FISHERY.

These fish are beginning to attract the attention of our people since the opening of the Intercolonial Railway, and should be protected from improper fishing. I would, therefore, recommend the immediate adoption of a close time the same as that of New Brunswick, and that no nets be used for their capture of less than one and one-half inch mesh extension measure.

SHAD FISHERY.

This fishery also shows a falling off, but not to the same extent as the alewife fishery. In my opinion this arises chiefly from overfishing. Brush weirs should and will have to be prohibited sooner or later if we are to retain this fishery, and drift nets should be very much curtailed in their length, say six fathoms to each boat. I am aware that many influential people are interested in the weirs, and a hard fight would be made over their abolition, still it will have to be done. These fish, in my

opinion, do not spawn in our rivers, but come down here from American rivers to feed on the shad worm, which is found in great abundance in the waters and on the mud flats of the Bay of Fundy, and on which it is known the shad feeds. I feel satisfied that this is the case, because the few shad which enter our rivers for spawning purposes do so with the alewives in the latter part of May and up to the 20th June, while the Bay of Fundy shad are not caught until the 20th June, and are then quite fat and no spawn in them, and, besides, there are more than ten times as many shad caught in the bay as enter our rivers, and, again, they are a different looking fish, being much larger and darker on the back than the bay fish. It is seldom a shad is seen in our small rivers among the alewives. I am not informed as to the quantity that enter the St. John River early for spawning purposes, but I think it will be found that they are quite insignificant as compared to the large quantities which swarm the bay in June and July. I think it will be found that as the Americans improve their shad fisheries by artificial culture and protection our bay shad fishery will correspondingly improve—time will tell. These are a most delicious and valuable fish and should not be destroyed, but more stringent laws should be enacted for their protection and preservation. They could also be cultivated to great advantage, I think as much so as salmon, and there are great natural advantages in the Province for the prosecution of fish culture of almost any description.

LOBSTERS.

It will be seen by the returns that these fish show a large increase over the previous year; the prices in foreign markets having somewhat improved, the business has been much enlarged. The close time for these, is not yet as it should be, the season being from twenty to thirty days earlier in the western and southern extremities of the Province than in the eastern. There should be that difference in the close time, as all fish spawn earlier or later, as the water is warmer or colder. Many of our lobster packers being branches of American firms, who carry on the same business in their own country, put up our lobsters with American labels, and they pass in foreign markets as the production of the United States; this practice is not fair to this country, and, I think, should be prohibited.

FISHWAYS.

These structures always will be liable to get out of repair, and will require a careful inspection, with a view to repair, each year, by a competent general inspector, because the rivers, at certain seasons of the year, are liable to high freshets, which often carry away, not only the fishway, but, in many cases, dam, mill and all. Such an officer, after a time, would become personally acquainted with the peculiarities and difficulties to be overcome in each stream, and, would consequently be the better able to locate and direct the construction of each fishway to much greater advantage than a local officer without any experience; this I have proved in this Province during the past two years. I will venture to affirm that there are more effective wooden fishways over dams, from twenty-two feet high and downwards, in this Province, than in any other part of this Dominion. I do not mean, however, to affirm that the system is yet complete, but, in a year or two more, I hope to be able to make it as near so as it is possible to do.

STATISTICS.

Although the returns for the past year do not foot up to as large a sum as the previous ones, it does not indicate a falling off in the fish crop, for the prices at which some of the items are made up are less than the previous year. At the same prices as adopted in 1876, our returns would foot up several hundred thousand dollars more than that year. While herring have largely fallen off, mackerel have largely increased; cod have also fallen off to some extent, while haddock and hake have about held their own.

I find continual, and almost universal complaints against the practice of trawl fishing, and a desire for a prohibitory law; but such a law would be most difficult and expensive to enforce, as officers for its enforcement would need to be supplied with vessels and men to continually traverse the coast during the fishing season; and as this mode of fishing is practised at all distances from the shore, by Americans as well as our own people, the enforcement of a law would be attended with great difficulty. This, with the practice of throwing fish offal on the fishing grounds, are the two most destructive and suicidal acts or practices indulged in by our fishermen, and it would be one of the greatest blessings to them, as well as advantages to the country, if both could be effectually prohibited.

have the honour to be, Sir,
Your obedient servant,

W. H. ROGERS,
Fishery Officer.

No.

RETURN showing the Number, Tonnage and Value of Vessels and Boats and Quantities o Fish, and the Total Number of Men employed,

COUNTIES.	VESSELS AND OATS EMPLOYED IN FISHING.						FISHING MATERIAL.											
	Vessels.			Boats.			Nets.			Weirs.								
	No.	Tonnage.	Value.	No.	Men.	Value.	Fathoms.	Value.	No.	Value.	Salmon, barrels.	Salmon, Fresh, in ice, lbs.	Salmon, Smoked, lbs.	Salmon, in cans, lbs.	Mackerel, barrels.	Mackerel, in cans.	Herrings, barrels.	Herrings, Smoked, in boxes.
<i>Annapolis.</i>																		
Margaret ville				8	720	24	1000	500	3	400	1500	500	1000	.....			
Port George	1	24	600	6	20	360	40	700	350	4	600	1500	50	1400	300			
Port William				23	920	46	1150	575	...	...	...	...	50	2500	.....		
Chute and Rice Coves.....				31	620	62	5280	2640	...	...	...	...	10	1000	.....		
Phiney and Young Coves.....				22	340	44	2180	1090	...	...	...	...	50	1200	.....		
Leonardi and Parker Coves.....				23	350	46	1800	900	1	50	...	...	25	1000	.....		
Leach and Delaps Coves.....	2	60	3100	18	15	300	40	1400	700	1	40	...	50	400	.....		
Gut Station	3	66	2400	24	56	1960	82	300	150	4	200	...	25	1300	1000			
Basin (both sides)				30	1050	60	...	...	12	1200	120	500	25	20000	.....		
Annapolis River				6	60	12	200	200	3	150	1000	...	...	...	...	...	...
Laquille River.....							...	...	...	...	1050	...	...	...	...	...	...
Round Hill .....							...	...	...	...	...	...	...	...	...	...	...
Nictaux River.....							...	...	...	...	...	...	...	...	...	...	...
Total	6	150	6100	48	234	6680	456	14010	7105	28	2640	5170	1260	9825	21300			

RECAPITULATION.—

Kinds of Fish.	Quantities.	Rate.	Value.
Salmon, Fresh, in ice	5,170 lbs. at.....	\$ cts. 0 15	\$ cts. 775 50
Mackerel	1,260 barrels ".....	10 00	12,600 00
Herrings	9,825 do ".....	4 00	39,300 00
do Smoked, in boxes.....	21,300 boxes ".....	0 25	5,325 00
Alewives	20 barrels ".....	3 50	70 00
Cod	900 cwts. ".....	4 25	3,825 00
Pollack.....	220 do ".....	3 50	770 00
Hake	2,007 do ".....	3 50	7,024 50

10.

engaged in the Fisheries; Quantity and Value of Fishing Material; Kinds &c., in the Province of Nova Scotia, for the Year 1877.

Alewives, barrels.	Cod, cwt.	Cod Tongues and Sounds, brls.	Hake, cwt.	Haddock, cwt.	Halibut, lbs.	Shad, barrels.	Bass, lbs.	Trout, lbs.	Smelt, lbs.	Eels, barrels.	Oysters, barrels.	Lobsters, cans.	Fish Oil, gallons.	Fish Guano, tons.	Fish used as manure, barrels.	FISH PRO- DUCTS.	VALUE.	WHERE MARKETED.	
50	50	12	10	6000					50	500	10,332	00	St. Johns.						
275	50	700	275	2200					400	333	11,702	75	Halifax.						
50		25							50	20	10,842	50	Boston.						
100	20	130	20	1000					100	200	5,345	00	do						
50		25	50	2000					50	25	5,940	00	Home consumption						
100	100	75	150	12000					200	50	6,687	50	do						
125		540	300						450	100	5,913	75	do						
150		500	400	9000					500	150	10,427	50	do						
			50			5	1000				100	10,343	00	do					
20								100				250	00	do					
								200					233	50	do				
								400					12	00	do				
													24	00	do				
29,900	220	2007	1255	32000	5	1000	700				1800	1478	78,053	50					

ANNAPOLEIS.

Kinds of Fish.	Quantities.	Rate.	Value.
Haddock	1,255 cwts. at.....	\$ cts. 3 50	\$ cts. 4,392 50
Halibut.....	32,000 lbs. ".....	0 06	1,920 00
Shad.....	5 barrels "	8 00	40 00
Bass.....	1,000 lbs. "	0 06	60 00
Trout.....	700 do "	0 06	42 00
Fish Oil.....	1,800 gallons "	0 65	1,170 00
Fish used as manure.....	1,478 barrels "	0 50	739 00
Total			78,053 50

RETURN showing the Number, Tonnage and Value of Vessels

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.											
	Vessels.			Boats.			Nets.			Weirs.								
	No.	Tonnage.		No.	Men.	Fathoms	No.	Value.	No.	Value.	Salmon, barrels.	Salmon, Fresh in ice, lbs.	Salmon, Smoked, lbs	Salmon, in cans, lbs.	Mackerel, barrels.	Mackerel, in cans.	Herrings, barrels.	Herrings, smoked, in boxes.
Antigonish.		\$	\$					\$		\$								
Antigonish.....	12	360	36	2280	2832		24	12000			350			100				
Arisaig.....	24	720	72	4560	5664				8000		200			50				
Morristown.....	1	25	750	5	52	1560	156	9120	11428		6000		2000		600			
Tracadie.....	6	240	7200	60	50	1500	150	9020	11228				600		550			
Total.....	7,265	7950	65	138	4140	414	24980	31152		24	26000		3150		1300			

RECAPITULATION.—

Kinds of Fish.	Quantities.	Rate.	Value.
		\$ cts.	\$ cts.
Salmon.....	24 barrels at.....	15 00	360 00
do fresh, in ice	26,000 lbs. "	0 15	3,900 00
Mackerel	3,150 barrels "	10 00	31,500 00
Herrings.....	1,300 do "	4 00	5,200 00
Cod.....	3,450 cwts. "	4 25	14,662 50
Hake.....	990 do "	3 50	3,465 00
Haddock.....	610 cwts. "	3 50	2,135 00

and Boats engaged in the Fisheries, &c.—*Continued.*

ANTIGONISH.

Kinds of Fish.	Quantities.	Rate.	Value.
Smelt.....	400 lbs. at.....	\$ cts. 0 06	\$ cts. 24 00
Eels.....	100 barrels "	9 00	900 00
Oysters.....	230 do "	3 00	690 00
Fish Oil.....	450 gallons "	0 65	292 50
			63,129 00

RETURN showing the Number, Tonnage and Value of Vessels

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.		
	Vessels.			Boats.		Nets.	Weirs.		
	No.	Tonnage. \$	Value. \$	Men.	No.	Fathoms.	No.	Value. \$	
<i>Cumberland.</i>									
Amherst Shore	5	100	6						25
Goose River.....	4	80	8						50
Gulf Shore									30
Malagash.....	4		4	*200	150				200
Oxford									
Pugwash	14	420	28	*1200	900			10	5
Pugwash River.....									
River Philip.....									
Toney Bay									10
Tidnish									300
Wallace Bay									
Wallace Harbour	6	180	8	*600	450				20
Wallace River.....									
Tidnish.....	5	100	20	500	400				300
Amherst Shore.....	4	80	16	400	320				240
Head of Bay.....	10	400	40	1350	1075		10600		
Advocate	25	1000	75	2500	500	1	20	1200	50
Port Grenville.....	8	300	25	200	100	4	100	1000	10
Parrsboro'	3	125	18			4	100	3500	10
Total	88	2785	248	6950	3895	9	220	18300	100
									2080

* Trap nets.

RECAPITULATION.—

Kinds of Fish.	Quantities.	Rate.	Value.
		\$ cts.	\$ cts.
Salmon, Fresh, in ice.....	16,300 lbs. at.....	0 15	2,445 00
Mackerel.....	100 brls. "	10 00	1,000 00
Herrings.....	2,080 do "	4 00	8,320 00
Alewives	430 do "	3 50	1,505 00
Cod	235 cwt. "	4 25	998 75
Pollack	165 do "	3 50	577 50
Hake.....	150 do "	3 50	525 00
Halibut.....	2,500 lbs. "	0 06	150 00
Shad.....	1,025 brls. "	8 00	8,200 00
Bass	275 lbs. "	0 06	16 50

and Boats engaged in the Fisheries, &c.—*Continued.*

KINDS OF FISH.										FISH PRO- DUCTS.	VALUE.	WHERE MARKETED.		
Alewives	barrels.													
Cod, cwt.														
Cod Tongues and Sounds, barrels.														
Pollack, cwt.														
Hake, cwt.														
Haddock, cwt.														
Halibut, lbs.														
Shad, barrels.														
Bass, lbs.														
Trout, lbs.														
Smelt, lbs.														
Eels, barrels.														
Oysters, barrels.														
Lobsters, cans.														
											\$	cts.		
10									20000		3,135 00	England.		
										400 00	do			
										120 00	do			
									28800		5,120 00	do		
100					1000	12000	2				1,148 00	do		
25									24000		3,807 50	do		
120									250		750 00	do		
									4000	10	930 00	do		
										60	40 00	do		
									100	24000	5,100 00	do		
									25		75 00	do		
									48000		7,380 00	do		
									200		600 00	do		
100									35000		6,800 00	Europe.		
									40000		6,960 00	do		
75					925	3000	1300			10		9,517 00		
75		40	50	500	250	250				25	5	2,865 00		
125		50	50	500	100					25	8	2,503 50		
35		75	50	1500	100	25	1200			60	10	3,363 75		
430 235		165	150	2500	1025	275	5550	17300	12	635	219800	120 23	200	60,614 75

CUMBERLAND.

Kinds of Fish.	Quantities.	Rate.	Value.
		\$ cts.	\$ cts.
Trout	5,550 lbs. at	0 06	333 00
Smelt	17,300 do "	0 06	1,038 00
Eels	12 brls. "	9 00	108 00
Oysters	635 do "	3 00	1,905 00
Lobsters	219,800 cans "	0 15	32,970 00
Fish Oil	120 gals. "	0 65	78 00
Fish Guano	23 tons "	15 00	345 00
Fish used as manure	200 brls. "	0 50	100 00
Total			60,614 75

RETURN showing the Number, Tonnage and Value of Vessels

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.					FISHING MATERIAL.				
	Vessels.		Boats.		Fathoms.	Nets.		Weirs.		Salmon, barrels. Ibs.
	No.	Tonnage.	No.	Value.		No.	Value.	No.	Value.	
<i>Colchester.</i>										
Sterling	9	150	16	60	25	...	...	...	...	...
Clifton.....	2	40	3	33	44	...	17	...	...	60
Princeport	10	134	12	160	180	...	12	...	...	...
Black Rock.....	2	50	4	50	70	...	10	...	...	...
Masstown.....	8	240	16	2000	400	...	5	4190	...	...
Debert	2	60	4	500	100	...	1	2000	...	...
Little Dyke	8	240	16	2400	500	...	2	4260	...	...
Great Village.....	2	60	4	450	110	...	2	1800	...	...
Great Village Point.....	7	210	14	2100	350	...	4	2910	...	...
Highland Village.....	5	170	10	1500	250	1	100	5	2750	...
Portaupaque	1	35	5	300	40	3	400	2	200	...
Birch Hill	3	100	7	1000	120	1	800	3	300	...
Bass River	3	120	8	900	150	2	700	5	400	...
Little Bass River.....	3	120	7	1050	200	1	100	3	1500	5
Upper Economy	12	360	28	3600	650	4	1300	12	6880	25
Economy Point	1	35	10	300	45	6	6000	...	...	45 60
Economy Village .....	...	...	15	...	10	...	3300	...	...	50 120
Five Islands.....	5	160	13	250	4	500	5	500	...	75
From Middle Stewi- acke Bridge to Junction with Shu- benacadie River	25	125	25	250	150	...	6250	...	...	...
Total	108	2409	217	16653	3434	32	13200	88	33940	260 180

RECAPITULATION.—

Kinds of Fish.	Quantities.	Rate.	Value.
		\$ cts.	\$ cts.
Salmon	88 brls. at.....	15 00	1,320 00
Salmon, Fresh, in ice.....	33,940 lbs. " "	0 15	5,091 00
Herrings	260 brls. "	4 00	1,040 00
do Smoked, in boxes.....	180 boxes"	0 25	45 00
Alewives	30 brls. "	3 50	105 00
Cod	110 cwt. "	4 25	467 50

and Boats engaged in the Fisheries, &c —Continued.

KINDS OF FISH.				FISH PRODUCTS.		VALUE.	WHERE MARKETED.
	Alewives, barrels.						
	Cod, cwt.						
20	Cod Tongues and Sounds, barrels.	3000	6000	22080	10	4,182 00	Home consumption.
30	Pollack, cwt.	10	—	—	—	335 00	do
	Hake, cwt.	10	—	—	—	365 00	do
	Haddock, cwt.	10	—	—	—	230 00	do
	Halibut, lbs.	85	—	—	—	1,383 50	do
	Shad, barrels.	21	—	—	—	483 00	do
	Bass, lbs.	80	—	—	—	1,309 00	do
	Trout, lbs.	30	—	—	—	540 00	do
		84	—	—	—	1,168 50	Home and United States.
		84	—	—	—	1,159 50	do
		100	5000	—	—	1,160 00	do
		150	—	—	—	1,290 00	do
		170	—	—	—	1,495 00	do
		116	—	—	—	1,218 00	do
		315	—	—	—	3,832 00	do
		281	—	—	—	2,443 00	do
		287	—	—	—	2,526 00	do
30	90	77	—	—	—	1,418 50	do
		25	1000 50000	—	10	4,202 50	Home consumption.
	110	1935	4000 61000	22080	20	30,770 50	

COLCHESTER.

Kinds of Fish.	Quantities.	Rate.	Value.
		\$ cts.	\$ cts.
Shad.....	1,935 lbs. at.....	8 00	15,480 00
TROUT.....	4,000 do ".....	0 06	240 00
Smelt.....	61,000 do ".....	0 06	3,660 00
Lobsters.....	22,080 cans ".....	0 15	3,312 00
Fish used as manure.....	20 brls. ".....	0 50	10 00
Total.....			30,770 50

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL						
	Vessels.			Boats.			Nets.		Weirs				
	No.	Tonnage.	Value.	No.	Men.	Value.	Fathoms.	Value.	No.	Value.	Salmon, brls.		
<i>Cape Breton.</i>													
Belfry	1	45	1400	6	240	18	240	120	6	60	Salmon, Fresh, in ice, lbs.	50	
Gabarus.....	1	20	800	6	83	2500	210	7700	1950	200	200	200	1240
Kennington Cove.....				9	226	24	400	200					100
Louisburg.....	1	18	300	7	59	1770	132	2140	1055	13	600	236	875
Big Lorraine.....				33	1260	70	5760	2490	4	100	162	740	
Little Lorraine.....				19	780	44	2750	1360	10	200	100	480	
Baulin				15	500	35	900	450	18	300	68	300	
Main à Dieu.....				37	1487	106	5100	2250	16	7407	308 22560	636	
Mira Bay and Cat- alone				46	1100	110	4400	2300	65	1200	260	550	
Mira River and Lewis Bay.....				28	140	30	500	250	600	600			
East Bay.....				17	170	30	600	300			5	250	
N side of East Bay including Boular- derie Island.....	19	530	5700	70	20	600	20	4500	14400	2500		300	
Albert Bridge.....				8	80	8	660	156	2000				
Mira Gut.....	1	25	400	6	3	36	6	800	360	15	1000		8
Round Island.....				9	100	9	455	200	5	500	1300	1	20
False Bay Beach.....				11	100	11	560	250	4	600	1	26	
Holmesville.....				6	90	8	200	80			7	12	
Wadden's Cove.....				13	130	15	220	90			20	32	
South side Cow Bay				10	400	35	700	360	12	400	60	100	
Flint Island.....				1	20	2	40	16			2	8	
Black Brook.....				2	70	5	220	66			27	42	
N. side Cow Bay...	1	42	150	6	8	210	14	480	200		40	97	
Long Beach.....				7	140	14	80	32				25	
Schooner Pond.....				7	120	14	280	120				10	
Big Glace Bay.....				17	200	34	1200	480	4	1200		68	
Little Glace Bay.....				15	300	29	1080	448			16	150	
Bridgeport.....				9	260	16	240	98				37	
Ling'n and Bar- rasois.....	1	18	300	6	10	225	20	400	160			38	
Lowpoint Shore and Lighthouse.....				25	250	45	920	350	200		4	180	
South Bar and S. side Sydney River	2	59	2600	14	30	300	44	1900	700	2146		1	185
											Herrings, brls.		

Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

KINDS OF FISH.										FISH PRODUCTS.	WHERE MARKETED.								
Herrings, Smoked, in boxes,	Alewives, brls.	Cod, cwt.	Cod Tongues and Sounds, brls.	Pollack, cwt.	Hake, cwt.	Haddock, cwt.	Halibut, lbs.	Shad, brls.	Bass, lbs.	Smelt, lbs	Eels, brls.	Oysters, brls.	Lobsters, cans,	Fish Oil, gall.	Fish Gnan, tons.	Fish used as manure, brls.	VALUE. \$ & cts.		
240										2000				130			1,424 50	Halifax.	
6225							400					6750	3120				36,480 75	Halifax and Home.	
20							400							130			1,969 50	Halifax.	
3540							413	600						1971			23,952 65	Halifax and Home.	
1485							495	500						990			13,372 25	Halifax and Traders.	
1045							195	400						620			8,650 75	Halifax and Home.	
700							102	300						400			5,805 00	Home.	
3000							370	3700					42192	1685			32,050 10	do	
2200							350	2400						1275			17,502 75	do	
30										450	1000						372 00	do	
15 350										600	600	12 55		175			3,048 75	do	
2800							200	20000					20		600		15,425 00	Halifax and Home.	
15							24		2	2200	1000	14 10					800 50	Home con- sumption.	
7 200							20	1200		1200	2000	30			100		1,950 50	Halifax and Home.	
100												5			60	1	959 00	Halifax and Cow Bay.	
75							10			300	600	10			40	3	832 75	do	
74										400	4				40	1	533 50	Home con- sumption.	
423							20	2000						220	4		2,518 75	Halifax and Home.	
450							10	3000						250			3,530 00	do	
25														900			743 25	Cow Bay.	
150										1600	400				75		1,244 25	Halifax and Cow Bay.	
480										2000		1200	10		240		3,266 00	Home con- sumption.	
40														20			355 00	do	
40														20			233 00	do	
60										600		300	5000	10		40	1	1,252 00	Halifax and Home.
360							30	3800						180			2,740 00	do	
200							5	1000						100			1,392 50	do	
240							10	800						120	5		1,648 00	Home con- sumption.	
250							14	1800						125	3		2,135 75	do	
483							20			400	2000	30			241			3,765 30	do

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL									
	Vessels.			Boats.			Nets.			Weirs						
	No.	Tonnage.	Men.	No.	Men.	Men.	Fathoms.	Value.	No.	Men.	Salmon, barrels.	Salmon, Fresh, in ice, lbs.				
Cape Breton--Continued.																
Syd' Forks River.	5	40	5	90	40											
Coxheath and S. side of N.W. Arm	18	350	36	600	210							35				
Point Edward and N. side Sydney River.	12	130	24	420	168				100			38				
Kilkenny Lake.																
Black Brook.																
Upper Mira.	6	36	6	196	52				400							
Total.....	26	739	11350	115	602	14360	1229	46731	31761	166	14046	1900	7407	1518	22560	6532

RECAPITULATION.

Articles.	Quantities.	Rate.	Total.
		\$ cts.	\$ cts.
Salmon.....	166 barrels at	15 00	2,490 00
do Fresh, in ice.....	14,046 lbs. "	0 15	2,106 90
do Smoked.....	1,900 " "	0 15	285 00
do in cans.....	7,407 " "	0 15	1,111 05
Mackerel.....	1,518 barrels "	10 00	15,180 00
do in cans.....	22,560 cans "	0 15	3,384 00
Herrings.....	6,532 barrels "	4 00	26,128 60
Alewives.....	77 " "	3 50	269 50
Cod.....	25,280 cwt. "	4 25	107,440 00
Hake.....	24 " "	3 50	84 00
Haddock.....	2,664 " "	3 50	9,324 00

Boats engaged in the Fisheries, &c.—Nova Scotia—*Continued.*

CAPE BRETON.

Articles.	Quantities.	Rate.	Total.
		\$ ets	\$ cts.
Halibut.....	48,300 lbs. "	0 06	2,898 00
Shad	2 barrels "	8 00	16 00
Trout	7,750 lbs. "	0 06	465 00
Smelet.....	23,400 " "	0 06	1,404 00
Eels	184 barrels "	9 00	1,656 00
Oysters.....	85 " "	3 00	255 00
Lobsters	48,942 cans "	0 15	7,341 30
Fish Oil.....	13,877 gallons "	0 65	9,020 05
do Guano.....	18 tons "	15 00	270 00
			191,127 80

RETURN showing the Number, Tonnage and Value of Vessels

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.					
	Vessels.			Boats.			Nets.			Weirs.		
	No.	Tonnage.	Men.	No.	Men.	Fathoms.	No.	Value.	No.	Value.	Salmon, barrels.	Herrings, Smoked, in boxes.
Digby.												
Westport	38	605	20450	178	74	1830	30	3100	1415	...	175	62 1200
Tiverton.....	6	122	5100	49	32	640	62	1600	800	...	...	50
Freeport.....	10	130	4400	42	50	1000	100	2000	1000	1 400	300	25 500
Digby	9	255	7000	70	24	480	24	810	800	5 800	...	450
Digby Gut.....					20	500	40	600	240	...	...	400
Gulliver's Hole.....					25	600	50	750	300	...	...	375
Centreville	3	70	3000	26	16	430	32	480	192	...	...	410
Sandy Cove.....	3	35	1000	16	16	550	32	400	152	2 150	3000	100 200
Mink Cove	11	40	900	9	6	150	12	350	144	1 100	...	200
Little River.....					22	850	44	660	264	...	...	250
Sea Wall.....					10	200	20	...	3 600	...	...	...
St. Mary's Bay.....					60	1800	100	...	8 1600	...	...	1000
Weymouth.....					20	400	40	600	240	2 250	50	...
Hillsburgh.....	3	100	3240	22	30	350	60	450	200	8 1600	...	...
Belliveau's Cove.....	1	12	600	5	48	864	96	864	400	1 200	8	10
Grosses Cove.....					30	800	60	500	800	1 200	6	40
Church Point.....	2	41	2500	15	20	800	40	400	700	1 200	10	40
Saulnierville					48	800	96	500	800	...	10	20
Meteghan River.....	2	41	2000	14	30	1000	60	500	800	1 200	20	30
Meteghan	2	37	2000	16	30	1000	60	500	800	2 400	5	200
Cape St. Marys	10	220	7000	75	15	450	30	1500	1050	...	100	100
Salmon River	1	12	600	5	10	150	20	180	100	...	100	10
Total.....	91	1720	59790	533	636	15644	1108	16744	11197	36 6700	4300	504 2872 2700

RE CAPITULA

Kinds of Fish.	Quantities.	Rate.	Value.
	\$ cts.	\$ cts.	\$ cts.
Salmon, Fresh, in ice.....	4,300 lbs. at.....	0 15	645 00
Mackerel	504 brls. "	10 00	5,040 00
Herrings	2,872 do "	4 00	11,488 00
Herrings, Smoked, in boxes	2,700 boxes "	0 25	675 00
Cod	21,175 cwt. "	4 25	89,993 75
Cod Tongues and Sounds	42 brls. "	7 00	294 00
Pollack	11,636 cwt. "	3 50	40,726 00
Hake	8,904 do "	3 50	31,164 00
Haddock.....	23,233 do "	3 50	81,315 50

and Boats engaged in the Fisheries, &c.—Nova Scotia.—*Continued.*

KINDS OF FISH.										FISH PRO- DUCTS.	Value.	Where Marketed.		
Alewives, brls.	Cod, cwt.	Cod Tongues and Sounds, brls.	Pollack, cwt.	Hake, cwt.	Haddock, cwt.	Halibut, lbs.	Shad, barrels.	Bass, lbs.	Trout, lbs.	Smelt, lbs.	Eels, barrels.	Oysters, barrels.	Lobsters, cans.	\$ cts.
6005	2696	614	7481	6000	.....	.....	.....	.....	.....	9361	....	100	72,082 40	Halifax, St. John, U.S. and Yar- mouth.
1235	1575	1200	1300	1800	.....	.....	.....	.....	.....	2985	....	.....	21,759 50	St. John, Halifax.
2000	2000	1000	1100	800	.....	.....	.....	.....	.....	2080	....	100	24,840 00	
2000	6	2000	800	1000	4000	.....	.....	.....	.....	1000	....	100	24,582 00	
500	2	250	275	160	2100	.....	.....	.....	.....	150	....	150	6,435 00	
500	2	250	650	50	1200	.....	.....	.....	.....	130	....	100	7,170 50	
900	2	300	1900	1000	1000	.....	.....	.....	.....	900	....	200	17,424 00	
500	1	400	450	450	500	.....	.....	.....	.....	700	....	100	9,467 00	
200	1	300	500	500	.....	.....	.....	.....	.....	700	....	100	6,712 00	
250	1	300	400	350	.....	.....	.....	.....	.....	600	....	.....	6,134 50	
250	1	100	300	150	.....	.....	.....	.....	.....	300	....	.....	3,182 50	
.....	.....	.....	2000	50	.....	2000	3	.....	.....	200	.....	.....	7,897 00	
25	25	50	900	.....	.....	2000	5000	15	.....	35	.....	.....	4,596 50	
1100	3	200	75	80	2000	.....	1000	5	.....	600	....	.....	6,553 50	
200	15	40	700	1000	.....	.....	.....	.....	.....	30	....	.....	3,692 00	
50	15	.....	800	100	.....	.....	.....	.....	.....	.....	.....	.....	3,291 00	
200	150	110	900	1000	.....	.....	.....	.....	.....	500	....	.....	5,555 00	
200	30	.....	800	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,935 00	
1000	10	.....	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,355 00	
1500	3	200	40	1500	6000	.....	100	.....	.....	1440	....	.....	14,638 00	
2500	10	800	500	1500	8000	.....	.....	.....	.....	5250	....	.....	25,787 50	
60	1	20	.....	12	300	.....	100	3	.....	.....	.....	.....	615 00	
21175	42	11636	8904	23233	35800	50	3200	7000	26	26761	....	1150	282,704 90	
1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

About one-eighth of the re-
turn of fish for this county
is used in the county.

Boston, Yar-
mouth and
Lunenburg.

TION.—DIGBY.

Kinds of Fish.	Quantities.	Rate.	Value.
Halibut	35,800 lbs. at.....	0 06	2,148 00
Shad	50 brls. ".....	8 00	400 00
Trout	3,200 lbs. "	0 06	192 00
Smelt	7,000 do "	0 06	420 00
Eels	26 brls. "	9 00	234 00
Fish Oil	26,761 gallons. "	0 65	17,394 65
Fish used as manure	1,150 brls. "	0 50	575 00
Total .....	.....	.....	282,704 90

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.					
	Vessels.			Boats.			Nets.			Weirs.		
	No.	Tonnage.	Value.	No.	Men.	Value.	No.	Fathoms.	Value.	No.	Value.	Herrings, barrels.
<i>Guysborough.</i>												
From Fisherman's Harbour to Coddles Harbour.....	3 110	4000	18	92	3310	184	10000	5000	3	300	10	768 245..... 2450
New Harbour.....				60	1575	135	9000	4500		1		150..... 1200
Torbay Point to Charles Cove.....				179	3580	358	15800	7900				205..... 500
White Head to Cole Harbour.....				250	7500	345	25000	12500	3	450	30	375..... 2500
Guysborough....	4 120	2000	20	100	3500	180	25000	12500	5	750	58	750..... 500
South Shore.....				120	1800	170	14000	7000	19	3800	35	250 2400..... 250
Canso, Dover....	6 240	12000	30	155	6300	315	27000	13500	20	4000	50	3600 4450..... 3150
North Shore.....				103	2750	160	17200	8600	4	400	10	559..... 215
Strait of Canso..	4 180	6400	12	120	3000	180	24000	12000	6	600		2450..... 2750
St. Marys.....				9	360	27	1425	570		20 6000	3500	10..... 264
Gegoggan.....				5	175	10	240	112			600	5..... 164
Indian Harbour..	3 50	760	9	18	350	36	945	378				20..... 210
Beckerton.....				8	120	16	660	308				25..... 180
Ecum Secum.....				16	320	32	375	150		5	60	70..... 80
Marie Joseph....	1 30	340	3	27	540	50	1200	560		120	1200	50..... 260
Liscomb.....				18	360	36	525	245			150	5..... 20
Big Liscomb....	1 15	250	3	13	200	24	225	105				125
Spanish Bay.....				12	240	24	450	600				10..... 255
Total.....	22 745	25750	95	1305	35980	2262	173045	86528	60	10300	219 6330	5370 4368 9639 2400 15123

NOTE.—About 8 per cent. of the

RECAPITULATION.—

Kinds of Fish.	Quantities.	Rate.	Value.
Salmon.....	219 barrels, at	15 00	3,285 00
" Fresh, in ice.....	6,330 lbs. "	0 15	949 50
" Smoked.....	5,370 "	0 15	805 50
" in cans.....	4,368 "	0 15	655 20
Mackerel.....	9,639 barrels "	10 00	96,390 00
" in cans.....	2,400 lbs. "	0 15	360 00
Herrings.....	15,123 barrels "	4 00	60,492 00
Alewives.....	159 "	3 50	556 50
Cod.....	15,836 cwt. "	4 25	67,303 00
Cod Tongues and Sounds.....	55 barrels "	7 00	385 00

Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

KINDS OF FISH.

HERRINGS, SMOKED, IN BOXES.	ALEWIVES, BARRELS.	COD, CWT.	COD TONGUES AND SOUNDS, OZ.	POLLACK, CWT.	HALIBUT, LBS.	SHAD, BARRELS.	BASS, LBS.	TROUT, LBS.	SMELT, LBS.	EELS, BARRELS.	OYSTERS, BARRELS.	LOBSTERS, CANS.	FISH PRODUCTS.	VALUE.	WHERE MARKETED	
2450	100	7800	2000	2000	7800	2000	10	2000	2000	2000	2000	2000	2000	\$ 5,261 95	Halifax & [U.S.]	
900	210	7200	800	800	7200	800	10	800	800	800	800	800	800	11,737 50		
1580	500	16590	1000	1000	500	1000	5	1000	1000	1000	1000	1000	1000	42,278 90	"	
1000	5	8750	5	5	8750	5	5	5	5	5	5	5	5	73,166 60	"	
30	250	350	20	20	350	20	20	20	20	20	20	20	20	13,002 50	"	
300	300	510	300	300	510	300	300	300	300	300	300	300	300	21,940 00	"	
50	5250	40	50	50	2625	3500	50	50	50	50	50	50	50	137,115 85	"	
129	200	500	200	200	500	400	500	400	500	500	500	500	500	7,872 25	"	
														37,250 00	"	
5	325	75	1800	5	1250	2200	5	50400	110	50400	110	50400	50400	12,533 75	Halifax.	
220	32	1500	32	32	1500	1600	4	1600	1600	1600	1600	1600	1600	2,104 00	"	
10	706	56	2400	56	700	1300	56	700	1300	700	700	700	700	4,672 00	"	
236	20	2500	20	20	2500	20	20	20	20	20	20	20	20	12,923 50	"	
4	510	30	700	30	600	400	30	600	400	600	400	600	400	4,040 00	"	
539	120	4500	200	200	800	5	200	800	5	82632	155	82632	155	17,281 65	"	
50	230	15	2000	300	300	20	20	300	20	73008	50	73008	50	12,659 20	"	
630	20	1800	300	300	400	200	200	300	400	200	200	200	200	3,527 50	"	
10	560	250	1050	235	800	235	800	235	800	235	800	235	800	4,645 60	"	
159	15836	55	370	14363	53340	10385	5500	88	1209344	7565	1209344	7565	1209344	7565	474,011 55	

above is used for home consumption.

GUYSBOROUGH.

Kinds of Fish.	Quantities.	Rate.	Value.
		\$ cts.	\$ cts.
Hake	370 cwt., at	3 50	1,295 00
Haddock	14,363 "	3 50	50,270 50
Halibut	53,340 lbs. "	0 06	3,200 40
Trout	10,385 "	0 06	623 10
Smelt	5,500 "	0 06	330 00
Eels	88 brls. "	9 00	792 00
Lobsters	1,209,344 cans	0 15	181,401 60
Fish Oil	7,565 gals. "	0 65	4,917 25
Total			474,011 55

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

No.	Counties.	VESSELS AND BOATS EMPLOYED IN FISHING.										FISHING MATERIAL.						KINDS OF FISH.					
		Vessels.					Boats.					Nets.			Weirs.			Mackerel, in cans.			Herring, in boxes.		
		No.	Tonnage per. ²	No.	Men.	Value.	No.	Men.	Value.	No.	Feathoms,	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.
1	North Shore, Halifax, West.	1	50	2000	10	160	4800	175	9000	2700	54	10800	\$	6000	2100	.....	151	150	222	500	.....	500	100
2	East Margaret's Bay.	1	190	5700	180	11000	3300	55	11000	3300	55	11000	5000	3000	3000	.....	54	53	53	53	.....	53	100
3	Indian Harbour.	1	120	3600	135	16000	4800	65	13000	3600	30000	30000	2200	20000	2200	20000	3500	3500	300	300	300	300	1500
4	Dover.	1	100	3000	115	12000	3600	40	8000	3600	16000	16000	15000	15000	15000	15000	6000	6000	1500	1500	1500	1500	1500
5	Upper Prospect.	1	1500	7	250	100000	256	48000	12000	80	16000	16000	15000	15000	15000	15000	2200	2200	60	60	60	60	60
6	Lower do	1	30	1500	7	70	4200	210	14000	4200	25	5000	2000	2000	1000	1000	1000	1000	430	430	40	40	40
7	Pennant.	1	70	2800	60	6000	1800	10	2000	1800	1000	1000	1000	1000	1000	1000	300	300	500	500	500	500	500
8	Sambro.	1	180	7200	120	5000	5000	3	600	5000	300	12000	12000	12000	12000	12000	12000	1000	1000	100	100	100	100
9	Keich Harbour.	6	180	9000	42	110	3300	130	6000	1800	20	4000	4000	4000	4000	4000	4000	1220	1220	200	200	200	200
10	Portuguese Cove.	10	325	26000	110	3600	130	35000	10500	30	6000	14000	14000	14000	14000	14000	14000	1450	1450	210	210	210	210
11	Herring.	12	2400	91	120	3600	180	8000	2400	40	8000	1000	1000	1000	1000	1000	1000	300	300	50	50	50	50
12	Ferguson's do	6	150	9000	42	80	2400	100	4500	1350	45	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000
13	Fresh fish sold in Halifax fish markets	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	Ecum Secum to Beaver Harbour.	2	37	1000	9	46	1309	98	3240	1620	.....	.....	600	600	600	600	151	151	222	222	222	222	222
15	Soher Island to Sheet do	1	30	1000	4	50	1352	55	4060	2030	.....	.....	840	840	840	840	54	54	53	53	53	53	53
16	Mushaboon to Pops do	9	337	9300	52	69	2712	131	18400	9200	.....	.....	216	216	216	216	1247	1247	2253	2253	2253	2253	2253
17	Tangier to Ship do	5	140	3300	30	49	2272	97	7400	3700	.....	.....	300	300	300	300	255	255	1300	1300	1300	1300	1300
18	West side Ship Harbour to Clam Bay	6	151	440	36	57	1194	101	8580	4290	.....	.....	300	300	300	300	161	161	1422	1422	1422	1422	1422
19	East and West Jeddore	11	252	11500	65	39	929	71	2840	1420	.....	.....	60	60	60	60	3024	3024	336	336	336	336	336
20	Musquodoboit Harbour to East side of Chezzetcook	3	42	1200	9	60	1765	121	5080	2540	.....	.....	1032	1032	1032	1032	816	816	124	124	124	124	124
21	West side Chezzetcook to Lawrencetown.	10	205	8650	51	97	2290	169	22420	11210	.....	.....	1016	1016	1016	1016	526	526	608	608	608	608	608
22	Cole Harbour to Eastern Passage.	2	24	800	9	33	599	57	3540	1770	.....	.....	3336	3336	3336	3336	107	107	288	288	288	288	288
23	Consumed in this District.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	72	72	1329	1329	1329	1329	1329
Total		771883	90150	4642060	683222	2691	242060	87730	467	93400	111700	5850	3840	26440	57736	14466	100						

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c—Nova Scotia—Continued.

No.	COUNTIES.	KINDS OF FISH.	FISH PRODUCTS.		WHERE MARKETED.	
			Fish Oil, gal-	Fish Guards, tons.		
1	Halifax, West.	Alewives, bars,	Cod, cwt.	Cod Tongues and Bonnets, barrels,	Haddock, cwt.	270
2	North Shore, Margaret's Bay....	50	350	4	36	26,386 00
3	East Margaret's Bay....	500	100	5	.....	33,558 00
4	Indian Harbour	1800	15	1000	.....	38,797 00
5	Lover.....	1600	16	1500	.....	60,406 00
6	Upper Prospect	150	1600	500	.....	103,666 00
7	Lower do	1250	12	200	.....	29,202 00
8	Fenwick	820	8	400	.....	8,673 00
9	Sambro	3600	36	25	.....	36,593 50
10	Kennebunk Harbour	25	3700	37 100	.....	28,789 50
11	Portuguese Cove.....	200	2	200	.....	16,820 00
12	Herring do	3750	37	610 100	50000	28,634 00
13	Ferguson's do	1760	17	150	25000	13,506 50
	Fresh fish sold in Halifax fish markets .....	.....	.....	.....	.....	25,000 00
						do
14	Halifax, East.	.....	.....	.....	.....	.....
15	Fcum Secum to Beaver Harbour.	1590	263	1400	1015	280700 1004
16	Sober Island to Sheet do ..	735	363	72	1580	244272 301
17	Mushaboon to Pope's do ..	8	2831	640	1200	2566
18	Tanger to Ship W. side Ship Harbr. to Clam Bay	2568	205	9200	16000	2033
19	W. side Jeddore to East Musquodoboit Harbour to East side Chezzetcook	105	1565	10	660	107000 1027
20	.....	40	4303	11	700	63904 3068
21	.....	12	2806	37	148	119688 2017
22	Clam Bay to Lawrencetown	202	2272	42	3100	1750 110000 1530
23	.....	23	802	6	3400	900 1800 591
	Cole Harbour to East'n Passage	869	2	85 11100	18	.....
	Consumed in this District	809	42721	222	396 3973	4574 104300 12495 136560 261
	Total	809	42721	222	396 3973	4574 104300 12495 136560 261
						1280564 29077
						819,943 10

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

RECAPITULATION—HALIFAX.

178

Kinds of Fish.	Quantities.	Rate.	Value.	\$ cts.
Salmon, Fresh, in ice.....	111,700 lbs. at	0 15	16,755 00	
Salmon, Smoked.....	" " "	0 15	877 50	
Salmon in cans	3,840 cans " "	0 15	576 00	
Mackerel.....	26,440 barrels " "	10 00	261,400 00	
Mackerel, in cans	57,736 cans " "	0 15	8,660 40	
Herrings.....	14,466 barrels " "	4 00	57,894 00	
do Smoked, in boxes	100 boxes " "	0 25	25 00	
Alewives.....	803 barrels " "	3 50	2,831 50	
Cod	42,721 ewt. " "	4 25	181,564 25	
Cod Tongues and Sounds	222 barrels " "	7 00	1,554 00	
Pollack.....	396 ewt. " "	3 50	1,386 00	
Hake.....	3,973 " "	3 50	13,905 50	
Haddock.....	4,574 " "	3 50	16,039 00	
Halibut.....	104,300 lbs. " "	0 06	6,258 00	
Trout.....	12,495 " "	0 06	749 70	
Smelt	136,560 " "	0 06	8,193 60	
Eels.....	261 barrels " "	9 00	2,349 00	
Lobsters.....	1,280,564 cans " "	0 15	192,084 60	
Fish Oil, gallons.....	29,077 gallons " "	0 65	18,900 05	
Fresh Fish sold in Halifax fish markets.....	.....	.....	25,000 00	
Total.....	.....	.....	.....	\$819,943 10

RETURN showing the Number, Tonnage and Value of Vessels

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.					FISHING MATERIAL.				
	Vessels.		Boats.			Nets.		Weirs.		
	No.	Tonnage.	No.	Men.	Fathoms.	No.	Value.	No.	Value.	
<i>Hants.</i>										
Maitland.....	4	176	8	745	275	.....	.....	15 $\frac{1}{2}$	.....	.....
Upper Selma.....	2	82	4	380	150	.....	.....	4	.....	.....
Lower Selma.....	1	35	2	200	78	.....	.....	3 $\frac{1}{2}$	.....	.....
Noel Shore.....	.....	.....	.....	.....	.....	1	215	1 $\frac{1}{2}$	.....	.....
Noel.....	3	183	6	800	290	1	280	9 $\frac{1}{2}$	.....	.....
Burncoat.....	2	112	4	415	160	.....	.....	1 $\frac{1}{2}$	.....	.....
Moose Brook.....	3	127	6	630	195	1	110	2	.....	.....
Tenny's Cape..	5	218	10	1215	355	2	125	4 $\frac{1}{2}$	.....	39
Walton.....	4	285	8	1025	414	1	65	5	.....	43
West Hants.....	13	300	18	1500	900	.....	.....	1800	.....	.....
Total	37	1518	66	7910	2817	6	795	46 $\frac{3}{4}$	1800	82

RECAPITULIA

Kinds of Fish.	Quantities.	Rate.	Value.
	\$ cts.	\$ cts.	
Salmon	46 $\frac{3}{4}$ brls. at	15 00	701 25
Salmon, Fresh, in ice.....	1,800 lbs. "	0 15	270 00
Herrings	82 brls. "	4 00	328 00
Cod	85 cwt. "	4 25	361 25

and Boats engaged in the Fisheries, &c.—Nova Scotia.—*Continued.*

KINDS OF FISH.		FISH PRODUCTS.		VALUE.	WHERE MARKETED.
Alewives, barrels.	Cod, cwt.	Cod Tongues and Soards, brls.	Pollack, cwt.]		
22	Cod, cwt.	Cod Tongues and Soards, brls.	Haddock, cwt.	742 00	
15			Halibut, lbs.	491 75	
			Shad, barrels.	264 75	
			Bass, lbs.	326 50	
			Trout, lbs.	900 90	
			Smelt, lbs.	297 80	
			Eels, barrels.	262 00	
			Oysters, barrels.	1,087 50	
			Lobsters, cans.	887 00	
			Fish Oil, gallons.	363 00	
			Fish Guano, tons.	5,626 20	
			Fish used as manure, barrels.		
85					

TION.—HANTS.

Kinds of Fish.	Quantities.	Rate.	Value.
Shad.....	491 brls. at.....	\$ 00	3,928 00
Fish Oil.....	58 gall. "	0 65	37 70
Total .....	.....	.....	5,626 20

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.			FISHING MATERIAL.			KINDS OF FISH.		
	Vessels.	Boats.	Nets.	Weirs.	Fathoms.	No.	Value.	No.	Value.
<i>Inverness.</i>									
1 Poller's Cove	5	50	15	200	137	3	.....	7	59
2 Pleasant Bay	13	399	52	359	300	7	.....	5	300
3 Black Rock	12	360	36	520	200	6	.....	350	480
4 East Cheticamp	58	5120	173	2600	1400	6	4708	787	5172
5 Cheticamp Point	26	3609	80	1700	1700	28	3000	68	12500
6 Eastern Harbour	17	1020	51	1408	1209	10	.....	2690	425
7 Big Pond, Cheticamp	19	600	30	1200	900	10	.....	630	2380
8 Frier Head	280	21	420	400	400	10	.....	300	1500
9 Douet Cove	207	15	30	.....	.....	10	.....	120	7
10 Delaney Cove	2	80	6	160	59	10	.....	153	250
11 The Rock	3	120	9	180	100	10	.....	20	62
12 O'Queen's Cove	6	216	18	700	276	10	.....	120	150
13 Whale Cove	20	1000	60	800	600	10	.....	5	200
14 Broad Cove Marsh	20	1000	60	800	600	10	.....	400	300
15 Margaree Island	10	500	30	400	250	10	.....	380	400
16 Port Bane, B.C. ....	.....	.....	.....	.....	.....	10	.....	200	150
17 Trout River, L.A. ....	.....	.....	.....	.....	.....	10	.....	17	350
18 West side Margaree Harbour	5	93	250	33	1680	60	20	1440	33000
19 East side Margaree Harbour	9	188	18	450	540	20	11	100	92
20 Chance Cove	23	2694	75	1360	870	10	.....	180	250
21 Douet Cove	23	309	34	950	1050	7	.....	220	380
22 Whale Cove	13	.....	.....	.....	.....	6	.....	15	114
23 Coal mines B, Cove	5	106	13	564	206	10	.....	1400	.....
24 Broad Cove Pond .....	.....	.....	.....	.....	.....	10	.....	.....	.....
25 Margaree River .....	.....	.....	.....	.....	.....	10	.....	.....	.....
26 Home Consumption .....	.....	.....	.....	.....	.....	10	.....	.....	.....

	1	8	250	5	12	20	200	200	10	10	2615	2615	
27 Port Hastings	10	110	600	600	200	200	2456	2456	
28 Port Hawkesbury	10	100	200	600	200	200	3637	3637	
29 Port Hood	10	150	300	900	300	300	1345	1345	
30 Mahon	10	90	18	500	175	175	1365	1365	
31 Judique	9	90	160	30	1000	400	50	50	
32 Judique Bank	10	100	200	600	200	200	600	600	
33 Creignish	10	100	20	600	200	200	500	500	
34 Toney Point	15	150	30	1000	400	400	700	700	
35 Whycoronaah	4	40	8	250	80	80	70	70	
36 South Side	6	65	12	300	120	120	100	100	
37 Little Narrows	4	40	8	200	80	80	90	90	
38 Malagawatch	10	100	20	600	200	200	300	300	
39 Marble Mountains	10	100	20	600	200	200	150	150	
40 Basin R. Dennis	4	8	8	200	80	80	100	100	
41 Boom	3	60	5	150	60	60	80	80	
42 North Mountains	6	110	12	300	200	200	60	60	
43 West Bay	4	89	8	200	100	100	60	60	
Total	17	454	14450	109	425	19237	1118	25301	23512	100	40	98108	1540
												33100	10183
												12590	500
												950	36995

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

COUNTIES.	KINDS OF FISH.	FISH PRODUCTS.		WHERE MARKETED.
		Fish Oil, gallons.	Fish Guano, tons.	
God Tongues and ounds, barrels.	Haddock, cwt.			\$ 617 35 Cheticamp.
Hake, cwt.				3,772 77 do
Bass, lbs.	TROUT, lbs.	400	3	5,903 50 Halifax and Jersey.
Shad, barrels.		30	3	34,008 88 Italy, Spain, Jersey and Brazil.
Sメelt, lbs.		42	3	65,031 00 Traders and United States.
Eels, barrels.		70	400	29,044 26 Halifax and Cheticamp.
Oysters, barrels.		200	350	18,857 47 do
Lobsters, cans				10,140 00 do
Fish used as ma- ture, barrels.				2,131 90 do
				2,780 54 Cheticamp.
				481 75 Margaree.
				1,976 42 do
				1,510 00 Halifax.
				5,996 50 do
				6,502 00 do
				2,990 00 do
				30 00 do
				18,781 50 do
				7,916 50 do
				3,942 25 do
				4,797 64 do
				1,093 15 do
				210 00 do
				36,297 30

RECAPITULATION.—INVERNESS.

RETURN showing the Number, Tonnage, and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.					
	Vessels.			Boats.			Nets.			Weirs.		
	No.	Tonnage.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.	Salmon, barrels.	Salmon, Smoked, lbs.
Kings.		\$			\$			\$		\$	Salmon, Fresh, in ice, lbs.	Salmon, in cans, lbs.
Starr's Point.....	48						3000	800				
Wolfville.....	16	8	300				1500	400				
Melford.....	20								6	600		
Pereaux.....	34								8	1000		
Oak Island.....	8						1500	350				
Hall's Harbour.....	60	38	460				1600	500	4	600	2000	250
Chipman Brook.....	5								1	100		
Black Rock.....	48	20	200				400	150	5	400	500	300
Harbourville.....	46	10	250						9	675	600	575
Morden Bay.....	20	4	140				390	150	3	300	1000	320
Scots Bay.....	40						2000	1000				
Porter's Point.....	14						1000	250				
Little Island.....	4						900	300				
Baxter's Harbour.....	10	5	100									
Gaspereaux.....											300	
Cornwallis.....											200	
North Aylesford.....												
South Aylesford.....												
Total.....	7		373	85	1450		12290	3900	36	3675	4600	1445

NOTE.—Those exported are shipped to the United States.

RECAPITULATION.—

Articles.	Quantities.	Rate.	Value.	
			\$	cts.
Salmon, fresh, in ice.....	4,600 lbs., at	0 15		690 00
Mackerel.....	1,445 brls. "	10 00		14,450 00
Herrings.....	5,445 " "	4 00		21,780 00
do Smoked, in boxes.....	4,000 boxes	0 25		1,000 00
Alewives.....	50 brls. "	3 50		175 00
Cod.....	1,775 cwt. "	4 25		7,543 75
Pollack.....	450 " "	3 50		1,575 00
Haddock.....	2,000 " "	3 50		7,000 00

Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

KINDS OF FISH.				FISH PRODUCTS.		VALUE.	WHERE MARKETED.
Mackerel, in cans.							
Herrings, barrels.							
Herrings, Smoked, in boxes.							
Alewives, barrels.							
Cod, cwt.							
Cod, Tongues and Sounds, barrels.							
Pollack, cwt.							
Hake, cwt.							
Haddock, cwt.							
Halibut, lbs.							
Shad, barrels.							
Bass, lbs.							
TROUT, lbs.							
Smelt, lbs.							
Bels, barrels.							
Oysters, barrels							
Lobsters, cans.							
Fish Oil, gallons.							
Fish Guano, tons.							
Fish used as Manure, barrels.							
						\$ ets.	
						1,810 00	
						495 00	
						690 00	
						1,375 00	
						492 50	
						26,150 00	
						792 50	
						5,685 00	
						15,462 50	
						5,345 00	
						3,710 00	
						1,220 00	
						695 00	
						477 00	
						421 00	
						219 00	
						18 00	
						18 00	
						65,075 50	

About one-fourth are consumed in the county.

KING'S COUNTY.

Articles.	Quantities.	Rate.	Value.
		\$ ets.	\$ ets.
Shad.....	995 brls., at	8 00	7,960 00
Trout.....	1,000 lbs. "	0 06	60 00
Smelt.....	4,000 " "	0 06	240 00
Eels.....	14 brls. "	9 00	126 00
Fish Oil.....	1,555 gall. "	0 65	1,010 75
Fish used as manure.....	2,930 brls. "	0 50	1,465 00
Total.....			65,075 50

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.		FISHING MATERIAL.		KINDS OF FISH.	
	Vessels.	Boats.	Nets.	Weirs.	Salmon, Fresh, in ice, lbs.	Salmon, Smoked, in cans.
	No.		No.	No.	Value.	Value.
					Men.	Men.
					\$.	\$.
Lunenburg.						
1 From Lunenburg to Cross Island.....	40	2539	122025	530	315	12800
2 Mahone Bay to Indian Point and Islands.	18	958	52200	240	120	3750
3 Lahave to Iron Bound Island.....	30	1800	88500	410	235	9918
4 New Dublin to west side LaHave River.	30	1600	80500	338	252	9400
5 Fish used fresh in District of Lunen- burg.....	.....	.....	.....	.....	.....	.....
6 Chester	3	160	19000	39	50	100
7 Martin's River	3	120	5000	45	20	40
8 Fox Point .....	.....	.....	.....	.....	20	200
9 Mill Cove .....	.....	.....	.....	40	400	400
10 Lodge.....	.....	.....	.....	30	300	60
11 North-West Cove.....	.....	.....	.....	11	110	22
					12000	12000
					4	4
					600	600
					200	200
					100	100
					1800	1800
					12000	12000
					1575	1575
					3650	3650
					3000	3000
					3500	3500
					4800	4800
					340	340
					700	700
					2100	2100
					250	250
					800	800
					1200	1200
					600	600
					1800	1800
					2000	2000
					1000	1000
					1500	1500
					900	900
					6	6
					1000	1000
					12000	12000
					6500	6500
					500	500
					1600	1600
					12000	12000
					400	400
					1000	1000
					2000	2000
					400	400
					1800	1800
					12000	12000
					1000	1000
					12000	12000
					700	700
					200	200
					12000	12000
					514	514
					50	50
					60	60
					600	600
					46	46

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia.—Continued.

COUNTIES.	KINDS OF FISH.	FISH PRODUCTS.		WHERE MARKETED.	\$	cts.
		VALUE.	FISH USED AS MANURE, BARRELS.			
1 From Lunenburg to Cross Island.....	Haddock, cwt.					
12 38500 25 4500 : 610 6400 102000	Halibut, lbs.	2500 3200	60 150000	28750	50 300	304,080 00
2 Mahone Bay to Indian Point and Islands.....	Bass, lbs.	5000 3800	24 26	8900	10 86	86,592 50
3 Lahave to Iron Bound Island.....	Salad, barrels.	3500 66000	2100 2000	18000	40 125	159,682 50
4 New Dublin to west side Lahave River....	Trotout, lbs.	4800 40000	20 4500	30000	40 160	207,196 00
5 Fish used fresh in District of Lunenburg.....	Eels, barrels.	.....	.....	.....	.....	5,000 00
6 Chester.....	Oysters, barrels.	100 6000	.....	168000	1500	53,745 00
7 Martin's River.....	Alewives, barrels.	.....	.....	.....	1400	9,320 00
8 Fox Point.....	Cod, cwt.	5	60	.....	.....	do
9 Mill Cove.....	Old Tongues and Sounds, barrels.	.....	.....	.....	7,590 00	do
10 Lodge.....	Pollack, cwt.	.....	.....	.....	5,435 00	do
11 North-West Cove.....	Hake, cwt.	.....	.....	.....	7,220 50	do
	Gad, cwt.	.....	.....	.....	100	6,830 50

West Indies
and U. S.
do

Lunenburg,
Halifax and
Lockeport.

RECAPITULATION.—LUNENBURG.

Kinds of Fish.	Quantities.	Rate.	\$ cts.
Salmon, Fresh, in ice.....	15,520 lbs. at.....	0 15	2,328 00
Smoked	2,950 do	0 15	367 50
Black Cod.....	15,677 barrels	10 00	156,770 00
Mackerel.....	30,310 lbs.	0 15	4,455 00
Sardines.....	16,596 barrels	4 00	66,384 00
Tuna.....	318 do	3 50	1,113 00
Alewives.....	109,110 ewtl.	4 25	463,717 50
Cod.....	86 barrels	7 00	602 00
Tongues and Sounding Fish.....	8,810 cwt.	3 50	30,940 00
Haddock.....	7,614 do	3 50	26,649 00
Halibut.....	17,983 do	3 50	62,958 00
Lahal.....	228,000 lbs.	0 06	13,680 00
Shad.....	30 barrels	8 00	240 00
Trout.....	14,100 lbs.	0 06	846 00
Swordfish.....	11,500 do	0 06	690 00
Tuna.....	150 barrels	9 00	1,335 00
Tuna Fish.....	3,8,000 cans	0 15	52,200 00
Whale Oil.....	82,890 gallons	0 65	53,878 50
Fish Guano.....	140 tons	15 00	2,100 00
Used as manure	671 barrels	0 50	335 50
Fish used fresh in Lauenburg District.....	.....	5,000 00	.....
Chester District.....	do	.....	6,175 00
Total.....	.....	.....	952,860 00

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.					
	Vessels.			Boats.			Nets.			Weirs.		
	No.	Tonnage. \$	Value. \$	No.	Men.	No.	Fathoms.	\$	Value. \$	No.	Value. \$	Salmon, barrels.
<i>Pictou.</i>												
W. District of Pictou	30	660	64	1,000	1,500					11,255		
Lismore	4	27	5	994	606					11,783	4½	3½
Ponds	7	91	14	1,174	1,069					11,907	25½	29½
North Beach	4	52	6	930	780					11,933	5	1
Big Island	6	85	10	1,975	1,830					33,927	16	10
Little Harbour	8	116	18	1,410	770					13,670		34
Chance Harbour	14	160	24	1,615	1,125					15,950	½	19
Pictou Island	2	25	4	344	320					4,700		23
Total	75	1,216	145	9,442	8,000					115,055	51½	320

RECAPITULIA

Kinds of Fish.	Quantities.	Rate.	Value.
		\$ cts.	\$ cts.
Salmon, Fresh, in ice	115,055 lbs., at	0 15	17,258 25
Mackerel	51½ brls. "	10 00	515 00
Herrings	320 " "	4 00	1,280 00
Hake	108½ cwt. "	3 50	379 75
Trout	1,065 lbs. "	0 06	63 90
Smelt	3,370 " "	0 06	202 20

Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

KINDS OF FISH.										FISH PRODUCTS.		WHERE MARKED.
										VALUE.		
										\$ cts.		
Herrings, Smoked, in boxes.	Alewives, barrels.	Cod Tongues and Sounds, barrels.	Pollack, cwt.	Hake, cwt.	Haddock, cwt.	Halibut, lbs.	Shad, barrels.	Bass, lbs.	Trout, lbs.			Home and Halifax. \$8,099.55 shipp'd to U.S. \$9,455.30 used in the county.
2 $\frac{1}{2}$				425	1,300	1			24,000			6,088 25 1,949 00 2,715 50 1,843 95 5,338 20 2,183 00 2,728 20 797 00
89				640	1,000	10				2		
12									87			
2									11			
3												
1,070	20											
108 $\frac{1}{2}$												
1,065	3,370	31							24,000	100		23,643 10

TION.—PICTOU.

Kinds of Fish.	Quantities.	Rate.	Value.
Eels.....	31 brls., at	\$ cts.	\$ cts.
Lobsters.....	24,000 cans, "	0 15	3,600 00
Fish Oil	100 gals. "	0 65	65 00
Total.....			23,643 10

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.								FISHING MATERIAL																	
	Vessels.				Boats.				Nets.		Weirs.		Salmon, barrels.		Salmon, Fresh, in ice, lbs.		Salmon, Smoked, lbs.		Salmon, in cans, lbs.		Mackerel, barrels.		Herrings, barrels.			
	No.	Tonnage.	No.	Value.	No.	Men.	No.	Value.	No.	Fathoms.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.		
Queens.																										
Liverpool	18	639	31500	136	81	2700	168	7500	2000	.....	.....	15000	1200	.....	938	.....	1535	.....	.....	.....	.....	.....	.....	.....	.....
Port Medway..	15	598	29900	209	109	2160	269	2960	1480	.....	10000	.....	.....	207	.....	163	.....	.....	.....	.....	.....	.....	.....	.....	.....
Port Mouton..	5	150	5000	35	30	1350	75	1200	840	.....	.....	300	6000	.....	300	6000	200	.....	.....	.....	.....	.....	.....	.....	.....
Brooklyn	5	150	7000	35	20	400	45	1100	450	.....	2500	.....	.....	.....	.....	.....	75	.....	.....	.....	.....	.....	.....	.....	.....
Coffin Island..	1	25	1200	7	16	450	40	800	320	.....	.....	200	.....	30	.....	30	60	.....	.....	.....	.....	.....	.....	.....	.....
Beach Meadow .....	.....	.....	.....	6	60	12	.....	.....	.....	.....	200	.....	.....	.....	.....	.....	20	.....	.....	.....	.....	.....	.....	.....	.....
Eagle Head.....	.....	.....	.....	12	240	36	600	240	.....	.....	300	.....	.....	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pudding Pan.....	.....	.....	.....	14	304	38	1100	580	.....	.....	300	.....	.....	.....	.....	210	.....	.....	.....	.....	.....	.....	.....	.....	.....
Blue Berry	1	25	1400	10	18	360	45	7000	840	.....	250	.....	.....	.....	.....	75	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Head	4	80	4000	16	32	640	55	12800	1024	.....	.....	.....	.....	50	.....	100	.....	.....	.....	.....	.....	.....	.....	.....	.....
White Point..	1	25	700	6	8	260	16	5000	360	.....	.....	20	.....	20	.....	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hunt's Point..	3	75	2500	18	8	240	30	2000	280	.....	.....	40	.....	40	.....	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Port Joly .....	.....	.....	.....	40	890	85	500	250	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Flat Rocks....	2	40	2000	14	6	180	12	1200	168	.....	.....	50	.....	50	.....	40	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mills Village..	.....	.....	.....	75	468	60	1100	620	.....	7300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Port Le Bert..	.....	.....	.....	10	300	40	600	320	.....	.....	.....	.....	50	.....	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	55	1807	85200	486	485	11002	1026	45460	9752	36050	1200	1635	6000	2638

RECAPITULIA

Kinds of Fish.	Quantities.	Rate.	Value.
Salmon, Fresh, in ice.....	36,050 lbs. at	\$ 0 15	\$ 5,407 50
do Smoked	1,200 "	0 15	180 00
Mackerel.....	1,635 barrels "	10 00	16,350 00
do in cans.....	6,000 lbs. "	0 15	900 00
Herrings	2,638 barrels "	4 00	10,552 00
Alewives	60 do "	3 50	210 00
Cod	22,790 cwt. "	4 25	96,857 50
do Tongues and Sounds.....	91 barrels "	7 00	637 00

Boats engaged in the Fisheries, &c.—Nova Scotia—*Continued.*

KINDS OF FISH.				FISH PRODUCTS.		VALUE.	WHERE MARKETED.
Alewives, barrels.	Cod, cwt.	Cod Tongues and Sounds, barrels.	Pollack, cwt.	Hake, cwt.	Haddock, cwt.		
60 6920 30	1400	8000				Halibut, lbs.	
5296 15	593	7570				Shad, barrels.	
2000 15	400	5000				Bass, lbs.	
1460 8	400					Trout, lbs.	
580	400	1000				Smeit, lbs.	
						Eels, barrels.	
						Oysters, barrels.	
						Lobsters, cans.	
						Fish Oil, gallons.	
						Fish Guano, tons.	
						Fish used as manure, barrels	
74,830 00							West Indies.
42,261 60							England.
30,470 00							South America.
8,700 00							United States.
4,872 00							do
110 00							do
850 70							do
2,277 50							do
4,999 50							do
13,910 00							do
4,972 50							do
7,360 00							do
22,135 00							do
4,560 00							do
2,492 50							do
4,192 50							do
60 22790 91	5123	28570		190	433800	17654	\$228,993 80

T I O N . — Q U E E N S .

Kinds of Fish.	Quantities.	Rate.	Value.
Haddock	5,123 cwt. "	\$ 3 50	\$ 17,930 50
Halibut	28,570 lbs. "	0 06	1,714 20
Eels	190 barrels "	9 00	1,710 00
Lobsters	433,800 cans "	0 15	65,070 00
Fish Oil	17,654 gall. "	0 65	11,475 10
Total			\$228,993 80

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.								
	Vessels.			Boats			Nets.			Weirs					
	No.	Tonnage.	Value.	No.	Men.	Value.	Fathoms.	No.	Value.	Salmon, barrels.	Salmon, Fresh, in ice, lbs.	Salmon, Smoked, Ibs.	Salmon, in cans, Ibs.	Mackerel, barrels.	Herrings, barrels.
<i>Richmond.</i>															
Arichat				100	2000	180	4000	2000		200	600		1200		
Arichat West				100	2000	200	4000	2000		300	200		400		
Port Royal				9	180	18	1000	500			12		30		
Petit de Grat	14	420	8400	98	77	1540	231	3500	1750	40	200		500	600	
Cape Hogan				100	2000	250	6000	3000		8		100		150	
Little Antz				31	620	62	4000	2000				310		460	
Gros Nez				70	1400	140	4000	2000		15	200		420		
D'Escousse	11	400	8800	110	20	400	40	1100	550		1000		200	140	
Polimand	5	200	4000	50	10	200	20	550	275				100	50	
Lower D'Escousse	5	200	4000	50	5	100	10	250	125				50	25	
Rocky Bay				44	880	84	3000	1500		1	200		250	200	
Cape Le Rond					7	140	14	2500	1250				180	200	
Port Richmond	3	178	3560	12	12	240	24	1640	820				50	50	
Cariboo Cove					27	540	54	6480	3240				1000	700	
River Inhabitants & Basin	1	38	1000	6	30	360	40	6000	3000		10	2000		200	400
Martinique & Grangdique	2	50	600	10	6	120	12	1200	600				70	145	
West Bay	1	32	1200	6	18	144	18	400	200					30	
Fourchu	2	120	3000	16	70	1680	180	5600	1680				210	560	
Framboise					24	578	52	3000	950				170	608	
St. Esprit					5	130	11	1000	500				60	200	
Larchevêque					16	640	34	3840	1050				160	640	
Grand River					30	1200	60	8400	3360				420	1500	
Point Micheau					22	550	52	6500	3000		2		300	800	
L'Ardoise	3	97	3500	23	133	3200	280	18000	3400		40		10400	2700	
St. Peter's Island					50	1000	100	2600	1050		4		110	6000	
St. Peters	2	100	1000	16	46	4600	92	5500	1370		5		460	690	
River Bourgeoise	45	1350	39000	360	17	400	40	1200	600				650	800	
Total	94	3185	78060	755	1079	26842	2298	105260	41770		1254100		17182600	13893	

RE CAPITULATION.—

Kinds of Fish.	Quantities.	Rate.	Value.
Salmon	125 brls., at	\$ cts.	\$ cts.
Salmon, Fresh, in ice	4,100 lbs. "	0 15	615 00
Mackerel	17,182 brls. "	10 00	171,820 00
Mackerel, in cans	6,000 lbs. "	0 15	900 00
Herrings	13,893 brls. "	4 00	55,572 00
Alewives	646 " "	3 50	2,261 00
Cod	37,330 cwt. "	4 25	158,652 50
Cod Tongues and Sounds	193 brls. "	7 00	1,351 00
Pollack	19 cwt. "	3 50	66 50
Hake	730 " "	3 50	2,555 00
Haddock	23,014 " "	3 50	80,549 00

Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

KINDS OF FISH.										FISH PRODUCTS.		VALUE.	WHERE MARKETED.			
Herrings, Smoked, in boxes.	Alewives, barrels.	Cod, cwt.	Cod Tongues and Sounds, barrels.	Pollack, cwt.	Hake, cwt.	Haddock, cwt.	Halibut, lbs.	Shad, barrels.	Bass, lbs.	Trout, lbs.	Smelt, lbs.	Eels, barrels.	Oysters, barrels.	Lobsters, cans.		
30 1600	90 ...	5000	20 ...	1000	50	3300	1000	... ...	100	10000	6	158976	1600	Fish Oil, gallons.	\$ 55,036 40	
50 600	5 ...	200	2000	100	...	...	...	...	...	...	...	...	1200	Fish Guano, tons.	14,894 00	
7 50	...	30	200	200	...	...	100	10000	...	...	...	...	60	Fish used as manure, barrels.	1,993 00	
30 5000	20 ...	150	5376	...	...	...	...	...	...	...	...	...	4500		51,791 00	
15 1000	3 ...	100	2000	...	...	...	...	...	...	...	...	...	1000		14,043 50	
620	5 ...	784	...	...	...	...	...	...	...	...	...	...	500		10,679 00	
20 100	...	140	...	...	...	...	...	...	...	...	...	...	120		7,118 00	
50 5000	30 ...	500	20000	...	...	...	...	...	...	30	45420	...	2750		36,163 50	
20 2000	15 ...	112	7000	...	...	...	...	...	...	10	...	...	1200		11,557 00	
10 2000	15 ...	160	2000	...	...	...	...	...	...	...	...	...	1000		10,570 00	
50	10 ...	30	...	...	...	...	...	...	...	...	...	...	40		3,723 50	
80	5 ...	67	...	...	...	...	...	...	...	...	...	...	50		3,224 50	
40	...	...	...	...	...	...	...	...	...	...	...	...	300		840 00	
250	300	...	200	450	...	...	...	...	...	...	...	...	300		17,420 00	
50	10	...	275	...	...	...	1000	1200	50	...	...	...	50		5,844 50	
14	440	...	470	...	...	...	200	1200	10	...	...	...	60		5,057 00	
80	...	...	...	...	...	...	400	200	4	...	...	...	...		532 00	
2800	...	...	...	...	...	...	...	...	...	24000	1400	...	1400		20,750 60	Halifax.
316	...	...	...	...	...	...	...	...	...	...	156	...	...	156	5,576 40	"
50	...	...	...	...	...	...	...	...	...	...	45	...	...	45	1,641 75	"
144	...	...	...	...	...	...	...	...	...	...	96	...	...	96	4,834 40	"
90	...	...	...	...	...	...	...	...	...	...	70	...	...	70	10,628 00	"
11	250	5 4	150	...	...	...	...	...	...	...	...	...	150	...	8,002 50	"
10	2700	...	5000	...	...	...	...	...	...	...	3800	...	50	3800	146,880 00	"
4	300	...	650	1600	3	...	...	...	4	100000	...	...	30	...	21,672 50	"
5	500	...	200	...	...	...	...	...	...	5	5062	...	...	5062	10,367 50	"
30	11250	5	1150	200	...	...	...	...	...	...	...	...	...	...	65,024 80	"
646	37330	193	19	730	23014	32100	3	1700	12600	19	30	328396	25259	...	545,863 75	

RICHMOND.

Kinds of Fish.	Quantities.	Rate.	Value.
Halibut	32,100 lbs. at	\$ cts.	\$ cts.
Shad	3 brls. "	0 06	1,926 00
Trout	1,700 lbs. "	8 00	24 00
Smelt	12,600 " "	0 06	756 00
Eels	119 brls. "	9 00	1,071 00
Oysters	30 " "	3 00	90 00
Lobsters	328,396 cans. "	0 15	49,259 40
Fish Oil	25,259 gals. "	0 65	16,418 35
Total			545,863 75

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.								FISHING MATERIAL.							
	Vessels.				Boats.				Nets.				Weir.			
	No.	Tonnage.	No.	Men.	No.	Value.	No.	Men.	Fathoms.	No.	Value.	No.	Value.	No.	Value.	No.
<i>Shelburne.</i>																
Lockeport, Sable Riv. and East Jordan....	28	1600	80000	303	50	4000	120	3800	2200	...	...	...	...	300	...	800
Wood's Harbour.....	8	254	7500	77	25	300	40	1016	896	7	6000	...	...	5124	...	338
Bear Point	3	100	3500	34	27	200	30	5000	1600	...	...	...	...	100	...	75
Shag Harbour.....	6	180	7200	60	14	170	22	1200	600	...	...	...	...	136	...	...
West Barrington.....	11	378	11450	103	9	225	15	1836	612	...	...	...	...	150	...	...
Lower Port Latour and Baccaro.....	2	100	6000	20	154	2818	156	8140	3100	1	1200	...	...	260	...	500
East Side Shelburne.	11	500	23900	111	51	2830	150	5000	1400	...	...	...	...	200	...	400
West Side Shelburne	1	59	2800	10	36	1440	106	2280	912	1	700	...	...	280	...	100
McNut's Island.....	1	60	2000	12	4	290	10	800	260	...	...	...	...	20	...	50
West Side Jordan....	1	65	2500	14	26	1395	55	2752	1200	...	...	...	...	291	...	535
Upper Port Latour..	6	225	14000	49	10	200	24	900	340	...	...	...	...	...	...	200
Port Clyde.....	2	120	4000	20	30	1240	73	1200	480	...	...	...	...	100	...	150
Blanche & Roseway..	2	42	1200	18	20	600	40	1450	432	1	1200	...	...	...	...	100
Cape Negro	7	320	20000	30	85	3000	250	15000	5550	1	1250	...	...	200	...	800
Cape Island	17	765	22950	170	...	...	...	...	...	9	9725	...	...	4980	...	...
Cape Island Boats .....	...	...	...	85	2550	160	6500	2540	...	...	...	...	...	900	...	850
Total.....	106	4768	209000	1031	626	21258	1251	56874	22122	20,	20075	...	...	13041	...	4898

RECAPITULATION.—

Articles.	Quantities.	Rate.	Value.
Mackerel	13,041 barrels, at	\$ cts.	\$ cts.
Herrings	4,898 " "	10 00	130,410 00
Alewives.	160 " "	4 00	19,592 00
Cod.....	68,100 cwt. "	3 50	560 00
Pollack	4,155 " "	4 25	289,425 00
Hake	150 " "	3 50	14,542 50
		3 50	525 00

Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

SHELBY. SHELBOURNE.

Articles.	Quantities.	Rate.	Value.
Haddock.....	5,305 cwt., at	\$ 3 50	18,567 50
Halibut	9,000 lbs., "	0 06	540 00
Eels.....	12 barrels, "	9 00	108 00
Lobsters.....	957,000 cans, "	0 15	143,550 00
Fish Oil.....	48,549 gall., "	0 65	31,556 85
			\$649,376 85

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.								FISHING MATERIAL.														
	Vessels.				Boats.				Nets.				Weirs.										
	No.	Tonnage.	No.	Men.	No.	Value.	No.	Men.	Fathoms.	No.	Value.	No.	Value.	Salmon, barrels.	Salmon, Fresh, in ice, lbs.	Salmon, Smoked, lbs.	Salmon, in cans, lbs.	Mackerel, barrels.	Mackerel, in cans.	Herrings, barrels.	Herrings, Smoked, in boxes.		
<i>Victoria.</i>																							
Bay St. Lawrence...	1	49	1200	5	25	500	50	1450	1000	...	...	22	...	214	...	100	...	...	...	...	...	...	...
North Harbour.....	4	48	2000	18	20	400	40	1500	1200	...	...	15	...	74	...	30	...	...	...	...	...	...	...
West Point.....	...	...	...	55	1100	110	4250	3400	...	...	6	...	140	...	61	...	...	...	...	...	...	...	...
French Cove.....	...	...	...	20	300	40	2500	2000	...	...	2	...	55	...	235	...	...	...	...	...	...	...	...
Newhaven.....	1	48	2500	4	20	450	55	2000	1600	...	...	8	...	15	...	23	...	...	...	...	...	...	...
Neal's Harbour .....	...	...	...	25	550	50	1750	1400	...	...	...	...	10	...	300	...	...	...	...	...	...	...	...
Green Cove.....	...	...	...	20	350	40	2000	1600	...	...	15	...	30	...	120	...	...	...	...	...	...	...	...
Ingonish.....	1	15	500	4	50	1805	100	2750	2200	...	...	28	...	292	...	100	...	...	...	...	...	...	...
South Harbour.....	1	14	500	4	140	3000	280	7500	6000	...	...	50	...	380	...	350	...	...	...	...	...	...	...
New Campbellton..	4	90	1200	16	25	500	50	800	400	...	...	12	...	42	...	...	...	...	...	...	...	...	...
Great Bras d'Or.....	...	...	...	30	600	60	870	470	...	...	10	...	50	...	...	...	...	...	...	...	...	...	...
Boularderie Island.....	...	...	...	4	80	8	80	40	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...
French River.....	...	...	...	6	120	12	200	100	...	...	...	...	25	...	...	...	...	...	...	...	...	...	...
North Shore.....	...	...	...	20	400	40	300	150	...	...	...	...	15	...	4	...	...	...	...	...	...	...	...
English Town.....	1	50	400	...	100	2000	200	5000	2250	...	...	16	...	150	...	25	...	...	...	...	...	...	...
Grand Narrows.....	...	...	...	10	200	20	300	150	...	...	...	...	150	...	...	...	...	...	...	...	...	...	...
Total	13	314	8300	51	570	12355	1155	33250	23960	...	...	184	...	1495	...	1498	...	...	...	...	...	...	...

RE CAPITULATION.—

Kinds of Fish.	Quantities.	Rate.	Value.
		\$ cts.	\$ cts.
Salmon.....	184 barrels at	15 00	2,760 00
Mackerel.....	1,495 do "	10 00	14,950 00
Herrings.....	1,498 do "	4 00	5,992 00
Cod.....	26,335 cwt. "	4 25	111,923 75

Boats engaged in the Fisheries, &c.—Nova Scotia.—*Continued.*

KINDS OF FISH.		FISH PRODUCTS.		WHERE MARKETED.
	Alewives, barrels.	Cod, cwt.	Haddock, cwt.	
2390	Cod Tongues and Sounds, barrels.		Halibut, lbs.	
1440	Pollack, cwt.		Shad, barrels.	
4500		200	Bass, lbs.	
1058		75	Trout, lbs.	
2560		600	Smelt, lbs.	
1068		100	Eels, barrels.	
1066		60	Oysters, barrels.	
3870		500	Lobsters, cans.	
5000		560	Fish Oil, gallons.	
1473		341	Fish Guano, tons.	
750		200	Fish used as manure, barrels.	
50				
350		150		\$ 1138,861 85 shipped to Halifax.
60				20,000 00 used in the county.
500		50		158,861 85
200				
26335		3351		
			17704	

VICTORIA

Kinds of Fish.	Quantities.	Rate.	Value.
		\$ cts.	\$ cts.
Haddock.....	3,351 cwt. at	3 50	11,728 50
Fish Oil	17,704 gallis. "	0 65	11,507 60
Total.....			158,861 85

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—
Nova Scotia—*Continued.*

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—
Nova Scotia—Continued.

COUNTIES.	KINDS OF FISH.	FISH PRODUCTS.		VALUE.	WHERE MARKED.
		Fish Oil, gallons.	Fish Guano, tons.		
Yarmouth.	Haddock, cwt.	Shad, barrels.	Bass, lbs.	Trout, lbs.	Smelt, lbs.
From Bay Shore to Yarmouth	Pollack, cwt.	Haddock, cwt.	Haddock, lbs.	Haddock, lbs.	Haddock, cwt.
1 Town	2795	250	1295	51300	5525
2 Yarmouth Town	1560	2277	1500	.....	8180
3 Shubenacadie	49	162	1000	.....	80
4 Little River	1490	115	500	150	86000
5 Tusket Wedge	1490	1500	.....	2	210
6 Salmon River	300	250	700	4000	5900
7 Pusket	300	250	1800	25000	57,993
8 East River	150	1700	600	.....	50,000
9 Bel Lake	250	1700	600	120	5000
10 Argyle	2890	2890	.....	20	2450
11 Argyle Sound	1745	100	6265	35000	20
12 East and West Pubnico	7939	3400	13564	89300	10
T. al.	7939	3400	13564	89300	20
				3100	29150
				237	110000
				37795	350,3330
				350	538,295
				30	50
				91,551	75
				93,344	00
				4,895	25
				16,523	50
				57,993	00
				1,877	00
				20,162	50
				1,261	00
				5,662	50
				39,972	75
				37,441	00
				167,611	25

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries,
Nova Scotia—*Continued.*

RECAPITULATION—YARMOUTH,

Kinds of Fish.	Quantities.	Rate.	Value.	\$ cts.	\$ cts.
Salmon Fresh, in ice	16,900 lbs.,	at .....	.....	0 15	2,535 00
Mackerel	10,318 barrels,	" .....	.....	10 00	103,180 00
Herrings	2,680 "	" .....	.....	4 00	10,720 00
Alewives	1,724 "	" .....	.....	3 50	6,034 00
Cod	63,501 cwt.,	" .....	.....	4 25	269,879 25
Cod Tongues and Sounds	197 barrels,	" .....	.....	7 00	1,379 00
Pollack	7,939 cwt.,	" .....	.....	3 50	27,786 50
Hake	3,400 "	" .....	.....	3 50	11,900 00
Haddock	13,564 "	" .....	.....	3 50	47,474 00
Halibut	89,306 lbs.,	" .....	.....	0 06	5,388 00
Trout	3,100 "	" .....	.....	0 06	186 00
Smelt	29,150 "	" .....	.....	0 06	1,749 00
Eels	237 barrels,	" .....	.....	9 00	2,133 00
Lobsters	110,000 cans,	" .....	.....	0 15	16,500 00
Fish Oil	37,795 gallons,	" .....	.....	0 65	24,568 75
Ship Ghano	350 tons,	" .....	.....	15 00	5,250 00
at used as Manure	3,330 barrels,	" .....	.....	0 50	1,665 00
Total.....	.....	.....	.....	.....	538,295 50

RECAPITULATION showing the Total Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, Quantity and Value of Fishing Material, (in the Province of Nova Scotia), for the Year 1877.

KINDS OF FISH.																		
FISHING MATERIAL.																		
VESSELS AND BOATS EMPLOYED IN FISHING.		Boats.		Nets.		Weirs.												
No.	Counties.	Tonnage per. No.	Value. Men.	Tonnage per. No.	Value. Men.	Tonnage per. No.	Value. Men.	Herrings, barrels.	Herrings, boxes.									
1	Annapolis	6	6100	48	234	6680	456	14010	7105	28	2640	5170	1260	3150	9825	21300		
2	Antigulish	7	265	65	138	4140	414	24980	31152	24	26000	16300	100	100	1380	1380		
3	Cumberland					88	2785	6950	9	220	3390	12300	88	3390	2080	2080		
4	Carlchester					108	2485	217	16633	3334	32	12300	14046	1900	14046	260	180	
5	Cat's Breton	26	739	115	602	14360	1229	46731	31761	166	14300	6320	7407	1518	22560	6532		
6	Digby	91	1720	523	15644	1108	16744	1197	36	6700	4300	504	504	504	2812	2700		
7	Guyshord' { West..	22	745	95	1305	35690	2262	173015	86328	60	10300	219	6320	4368	9639	2400	15123	
8	Halifax	28	765	199	1560	53900	1791	166500	49350	467	93400	104000	23100	23100	37000	4960	100	
9	Halifax	{ East ..	49	1218	265	500	14422	900	75560	37780	6	795	7700	5850	3810	2740	20736	
10	Ilants		17	494	14450	109	425	1937	1118	25301	23212	100	40	463	1800	10183	12890	500
11	Inverness												48	9108	1510	33100	10183	
12	Kings	7																
13	Lunenburg	126	7227	370725	1625	1319	39338	2203	125910	96461	76	11500	15530	2050	15530	15677	30340	16396
14	Pictou																	
15	Queens	55	1807	85200	486	485	11002	1026	45460	9752	100	800	116055	116055	514	514	514	514
16	Richmond	15	1806	755	1019	26812	22938	405260	41700	20	22000	17122	125	36050	1200	1635	6000	2638
17	Shelburne	94	209000	1031	626	21258	12511	56874	22122	20	23075	4100	125	17182	17182	17182	6000	1893
18	Victoria	13	314	8300	51	570	12955	1155	33250	23860	7	10400	184	16900	1495	1495	1495	1495
	Yarmouth	114	5030	236850	1466	431	12430	756	33425	14807	7	10400	184	16900	10318	10318	10318	10318
Total		76	28117	1206675	7216	10303	297466	18643	996358	50993	877	172945	9504	420919	17910	48715	113682	125036

**RECAPITULATION showing the Total Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries,
&c., Nova Scotia—Continued.**

No.	COUNTIES.	KINDS OF FISH.										FISH PRODUCTS.				WHERE MARKETED.	
		Cod, ewt.	Pollack, ewt.	Hake, cwt.	Haddock, ewt.	Habitat, lbs.	Shad, barrels.	Bass, lbs.	Trout, lbs.	Mullet, lbs.	Oysters, barrels.	Eels, barrels.	Fish Oil, gallons.	Fish Guano, tons.	Fish used as manure, barrels.		
1	Annapolis	20	900	220	2007	1265	32000	5 1000	700	400	100	230	1800	1478	78053 50		
2	Antigonish	3450	110	990	150	165	2500	1025	275	5550	17300	12	635	450	63129 00		
3	Cumberland	430	77	25280	110	24	48300	24	2	4000	61000	12	635	120	60614 75		
4	Colchester	30	21175	42	11636	8904	23233	35800	50	7750	23400	184	85	22080	13877	30770 50	
5	Cape Breton	159	15836	55	370	143363	53340	10385	3200	7000	26	100	26761	1150	282704 90		
6	Digby	315	22330	219	100	3410	3275	75000	10385	5500	88	1209344	7565	1150	474011 55		
7	Guy'sboro'	315	22330	219	100	3410	3275	75000	10385	5500	88	30	475000	14840	485031 50		
8	Halifax	491	20391	3	296	563	1299	29300	491	12495	136560	231	100	805564	14377	*25000 00	
9	Hants	950	36996	19	1015	15912	4850	1084	600	1522	72	100	100	58	56236 20		
10	Inverness	50	1775	450	2000	2000	995	1000	4000	14	100	100	2556	100	322609 42		
11	Kings	318	109110	86	8840	7614	17988	228000	30	14100	11500	155	100	1555	2930	65075 50	
12	Lunenburg	60	22790	91	1084	1084	1084	1084	1065	3370	31	100	348000	82890	140 671		
13	Pictou	646	37330	193	19	730	5123	285170	1065	190	12000	119	30	24000	100	11175 00	
14	Queens	160	68100	4155	150	5305	32100	3	1700	12600	119	30	433800	17654	23643 10		
15	Richmond	160	26351	197	7939	3400	89500	1000	1000	120	100	100	328396	25559	228993 80		
16	Shelburne	1724	63501	197	7939	13564	13564	1000	1000	120	100	100	557000	48549	545833 75		
17	Victoria	1724	63501	197	7939	13564	13564	1000	1000	120	100	100	110000	17704	649676 55		
18	Yarmouth	5433	469728	905	33820	294351	1186351	6686069	4536	65615	313302	1501	980	4982026	337170	158861 85	
	Total													350	3330	538295 50	
															531	979	5527858 37

* Fresh fish sold in Halifax fish markets.

† Home Consumption.

RECAPITULATION

Of the Yield and Value of the different Fisheries in the Province of Nova Scotia during the Year 1877.

Kinds of Fish.

Quantities.

Rate.

Value.

	\$ cts.	\$ cts.
Salmon	14,261 25	14,261 25
do Fresh, in ice	15 00	15 00
do Smoked	0 15	0 15
do do	63,137 85	63,137 85
Mackerel	2,686 50	2,686 50
do in cans	0 15	0 15
Herring	7,307 25	7,307 25
do	1,136,385 00	1,136,385 00
Alewives	18,755 40	18,755 40
Cod	452,392 00	452,392 00
Tongues and Sounds	7,195 00	7,195 00
P. Black	0 25	0 25
Hake	19,015 50	19,015 50
Haddock	3 50	3 50
Habibut	4,256 00	4,256 00
Shad	6,335 00	6,335 00
Bass	118,370 00	118,370 00
Trout	3 50	3 50
Smit	103,024 25	103,024 25
Eels	415,224 25	415,224 25
Oysters	40,083 60	40,083 60
Lobsters	36,288 00	36,288 00
Fish Oil	74,303 90	74,303 90
Fish Guano	219,160 50	219,160 50
Fish Manure	7,965 00	7,965 00
Fresh Fish sold in all the fish markets	0 50	0 50
do	4,889 50	4,889 50
In	25,000 00	25,000 00
do	36,297 30	36,297 30
do	11,175 00	11,175 00
Total Value of the Products of the Fisheries in 1877.....	5,527,858 37	5,527,858 37
do .....	.....	.....
Decrease	6,029,049 94	6,029,049 94
	501,191 57	501,191 57

No. 11.

REPORT OF W. H. VENNING, Esq., INSPECTOR OF FISHERIES FOR THE PROVINCE OF NEW BRUNSWICK, FOR THE YEAR 1877.

ST. JOHN, N.B., 31st December, 1877.

SIR,—I have the honour to submit the following Report on the Fisheries of this Province during the past year.

SALMON FISHERY.

The application of the license system to salmon nets has worked well, and fishermen generally have been better satisfied with the license fee levied on the nets, than with the old mode of a rate on the catch. In issuing these licenses, preference has been given to the old occupants, and they have thus obtained an official recognition of privileges heretofore held only on sufferance. In some few instances, efforts have been made by riparian owners to dispossess their neighbours of stands occupied by them for many years, but the issuing of licenses to old occupants has prevented this injustice. The facilities now offered by rail for getting fresh salmon to American and distant Canadian markets have caused a partial abandonment of the former mode of preserving this fish for export by the process of hermetically sealing in tin cans. This process is now used only to a limited extent, principally in filling orders for the European market. The increased demand for fresh salmon by the local dealers has given a great impetus to the fishery in every locality where it is carried on, and there is a strong disposition on the part of fishermen to evade the requirements of the law, which requires closer attention on the part of overseers and wardens. Many of these are actively engaged in fishing, and there is too much reason to believe that their private interests and public duties are antagonistic; the pursuit of the former leading them to neglect and slight the proper performance of the latter. In districts where the facilities for poaching are great, this conflict of self-interest with duty is hard to reconcile. These remarks are particularly applicable to the county of Northumberland, where almost every fishery officer is interested in fishery pursuits, and the consequence is that more illegal fishing is done on the Miramichi River and its branches than in any other county in the Province. The wardens are appointed at small yearly salaries, not sufficient to induce them, for the sake of the office, to give up fishing. In many cases complaints are made that these men are too intent on their own fishing to look much after that of their neighbors, and the consequence is that a degree of laxity and carelessness has grown up that calls for some immediate remedy.

The destructive practice of "drifting" for salmon off the mouths of rivers is becoming more common, and some stringent and effective means to put an entire stop to the practice, is loudly called for. It is alleged that, outside of three miles from shore, the jurisdiction of fishery officers ceases, and that they have no authority to enforce the Fisheries Act beyond that limit. A case is now pending in which this question is being tried. Should it be decided that our present law is insufficient to prevent this destructive practice, it will be absolutely necessary to procure the requisite legislation to supplement it; for should drifting become general, the salmon fishery on our coasts, and in all our rivers, will be rendered profitless, and a great injustice will be done to all who now pay a license fee for the privilege of fishing in accordance with the laws, by those who claim exemption from all law.

BASS FISHING.

The only counties in which this fishing is pursued, to any great extent, are Gloucester, Northumberland and Kent. In St. John River, bass have greatly increased since the enforcement of the close-time; but the fish taken there are used almost entirely for home consumption. In the first-named county, bass are taken principally by hook and line; in Northumberland and Kent, by scoop nets through the ice. In Gloucester, the catch of this fish is increasing; while in Northumberland and Kent it is sensibly diminishing year by year. There can be no doubt that this decrease has been brought about by two causes. The first is want of protection to gravid parents; the second is the great destruction of young fish. Formerly, the seines were the great source of this destruction; but now that their use is happily prohibited, another and a much larger cause has arisen. The close-time extended only from April to September, and this has not been sufficient to foster and protect the fishery. Bass taken after the 1st March, are gravid fish, with spawn and milt largely developed; consequently their capture, after that date, destroys, not only the parent fish, but all their progeny. Under the licenses issued, which restrict the use of nets from 1st October to 1st March, I had strong hopes that the threatened extinction of this fish in Northumberland would be averted; but the great destruction of young bass taken in the bag nets, used for the capture of smelt, will more than counterbalance all the good effects I anticipated from them. This enormous destruction is greatly to be deprecated, and I cannot too earnestly urge the adoption of immediate measures to put a stop to it. Were this done, the prohibition of seining adhered to, the close-time rigidly enforced everywhere, there is a fair prospect that this valuable fishery will be preserved as an important source of employment and wealth. Bass are now bringing to fishermen from 9c. to 12c. per pound, and are consequently more valuable to them than salmon, which brought only 6c. per pound, the past season. The catch, however, is not so large as that of last winter, and unless the destruction of young bass is immediately stopped, that of next winter will be still smaller. The results of the great waste of gravid fish that has been caused of late years by spring fishing, are now plainly to be seen in the falling off which marks this winter's yield. Nothing short of the measures I have urged will keep up the supply of this valuable fish. The experience of the past has proved that the nets set ostensibly for bass, after the 1st September, have taken more gravid salmon than bass, and the profit obtained from the latter does not compensate for the loss sustained by killing the former. Hence, it will be advisable to confine all bass fishing between the 1st September and the freezing of the rivers, to hook and line, by which mode nearly as many bass will be taken as the nets capture, and a serious destruction of gravid salmon will be prevented.

SHAD FISHERY.

This fishery has been failing for some years. The principal cause of this, at least in the St. John and Miramichi Rivers and in the Bay of Fundy and Dorchester Bay, I believe to be excessive fishing. In all these places set nets or drift nets are constantly at work. While the shad are in these waters, and the unequal contest between the reproductive powers of the fish and the destructive powers of the fisherman cannot much longer be maintained. I can suggest no remedy for the eventual extermination of this fish, for it comes to our waters only to spawn, stays but a short time, and then leaves for haunts unknown to our fishermen. If not caught while in our waters it will not be caught at all, and I know of no restrictions that would not be considered a hardship by those who pursue this fishery.

Early in the month of May, I had constructed, after a pattern furnished me by S. Wilmot, Esq., twenty boxes, such as are used by Seth Green, the well-known American shad-hatcher. I also had made a shad net of 80 fathoms, that could be used either as a bar net and pound, or as a seine. Having got these necessary implements ready, I visited Belyea's Point, Grand Lake and Washademoak Lake, and made personal inquiries as to the most favourable place for taking the parent shad when ready to spawn.

I ascertained that at Belyca's Point, on the St. John, the shad caught were not ripe, and that very seldom was a spawning fish taken so low down the river. At Grand Lake I found that the fish were scattered over a large extent of water, and that great difficulty would be experienced in taking a sufficient number at once. At Washademoak I learned that, in previous years, large numbers passed up this lake and ascended the Canaan River for some distance to spawn. As the river is narrow where it empties into the lake, I concluded to stretch a bar net, leading into a pound, across the channel, hoping by this means to secure each tide a sufficient number of fish to provide eggs and milt for one box. I arranged with Overseer Hetherington to employ the necessary assistance, set the net, and inform me when the fish made their appearance. He continued fishing from the 1st to 12th June, with no success, never taking more than three or four fish each tide. On the 14th June, just before the full moon, when, from all accounts, the largest run of fish might be looked for, I went up to see if some more effectual means could not be devised to secure the parent fish. After consultation with a number of fishermen, I concluded to go to a part of the river where, at the foot of a rocky ledge, over which the fish had to pass, was a deep pool, in which they rested before making the ascent of the rapid. By converting the bar net and pound into a seine and sweeping this pool, I was assured by old residents that a large number of fish would be taken. Hoping for the best, but feeling doubtful of success from the fact that the set nets in the lakes had, so far, taken but a few dozens of fish, where formerly they took hundreds, I sent ten of the hatching-boxes to Overseer Hogan, directing him to make preparations for taking shad on the North-West Miramichi, where formerly very large numbers used to be seined.

We then continued fishing with the seine for two days without any success, seldom taking more than two or three fish at a haul. These we tried to keep alive until a sufficient number might be secured to stock one box with eggs, by placing them in a partially submerged boat through which the water flowed freely, but they always died in a few hours.

Finding the seine useless, I converted it again into a bar-net, and stretched it entirely across the head of the pool, in such a manner that it would prevent any fish from passing upwards. I then instructed Overseer Hetherington to keep the net set until my return, and crossing over to Apohaque station, a distance of about 18 miles, I took the night train to Miramichi, where I arrived on Sunday morning. On Monday the 18th June, in company with Overseer Hogan and Mr. Sheasgreen, I went up the North-West, and using the seine taken from Alex. Henderson, spent the whole day in fishing at a place where formerly hundreds of shad were taken at a single haul. We took but 30 fish, 24 males, and 6 females, which latter had already spawned. Giving direction to Mr. Hogan to continue fishing until the full of the moon, and explaining to Mr. Sheasgreen how to use the boxes, I returned by night train to Apohaque and Washademoak, where I arrived on Tuesday the 19th June. We continued fishing on Wednesday without success, and on Thursday, 21st, news of the great fire in St. John rendered it necessary for me to return at once and look after the books and papers of the office; but which, to my dismay, I found had been entirely consumed.

Subsequent advice from Overseer Hogan informed me that no better success attended his further efforts. The very few fish taken at each haul of the seine, and the impossibility of keeping these alive until the requisite proportion of males and females could be secured to make manipulation a success, rendered all his efforts unsuccessful.

The result of my experiment led me to believe that the stock of breeding fish was very small this season, and the limited number taken in the set-nets on both rivers goes to strengthen this belief. This may be an exceptional season, but I very much fear that excessive fishing in the past has greatly reduced the numbers of this valuable species. The shad resorts to fresh water only to deposit its spawn, and it is a matter for grave consideration whether it should not be protected while in our rivers for that purpose. The spring shad, like all other fish on the point of spawning, is comparatively worthless, and much inferior to fall shad, which has regained condition after this exhausting process.

While I much regret the want of success that has attended my efforts to carry out the Minister's wishes, I am glad to state that the expense incurred will not be lost. Everything procured for the work, except the boxes, will be available for use at the Hatching House, this fall. The net was made in a manner adapted for taking the parent salmon, and would obviate the necessity of having one specially made for that purpose which would otherwise have to be done. The pans and dip-nets will also be needed here, and all the other articles provided for this experiment will be found useful at that establishment.

GASPEREAUX FISHERY.

As I predicted in all my former reports, the use of seines in the Miramichi, and the excessive netting of gaspereaux, which resort to our rivers only to spawn, has almost exterminated this fish in the county of Northumberland, where formerly an annual catch of some thousands of barrels was not uncommon. In all other counties there has been a great falling off in the catch, and I see no grounds for hope that this fishery will ever regain its former importance. On the contrary, I think there is every reason to expect that it will continue to diminish, year by year, simply because the reproductive powers of the fish are not sufficient to keep up the supply in the face of the yearly increasing numbers of those who engage in their capture. As all the fish that are taken are parent fish on the point of spawning, it cannot reasonably be expected that an undiminished supply of young fish can be kept up. Experience is too strong on this point to be ignored. In Dennis River, Charlotte County, which, a few years since, was opened to the ascent of the slim remnant that remained, they have increased rapidly under the fostering care of a more enlightened public opinion and a faithful officer. For the first three years no fishing at all was allowed. Then one day in the week was set apart for fishing; this continued two years, and the fish continued to increase. For the last two years, fishing has been allowed two days in the week, which gives abundance of fish for home consumption, and yet allows the parent to keep up the supply. In Nova Scotia, the same results have been obtained, but not more than three days' fishing in the week is allowed.

If a similar measure of protection could be enforced in all our waters where gaspereaux now resort, it is possible that the species might yet be saved from extinction. The experiment is well worth trying, and no hardship can be reasonably complained of, for the catch at present is so small that it affords profit neither to the fishermen nor the dealer. What I would urge, as a last effort, to preserve this very valuable and useful food fish, is to prohibit fishing everywhere for three years; after that to allow fishing only two days in each week until it was shown that the increase would permit three days' fishing in each week. Beyond this, I am persuaded, the natural increase of the fish will not allow. There are some localities where, no doubt, this entire prohibition for three years will be complained of; but it has come to a simple choice between two evils—the deprivation for three years, with a prospect of better fishing afterwards, or the total deprivation for all time, by a law of nature from which there is no appeal.

HERRING FISHERY.

The reduction of the license fee on herring weirs in Charlotte County has given great satisfaction to the fishermen, and all weirs are now under license. Most of the owners have willingly paid the fees; a very small number being now in arrears. The yield has been very good, and large quantities are now being taken and sent to market in a frozen state, at remunerative prices. During the last season, a new mode of curing the small fish has taken the place of the old method of pressing them for oil and pumice. Establishments are being started where they are put up as "Sardines," and this is found to be much more profitable than any other mode of curing them. This industry bids fair to grow to large proportions, and will greatly enhance the value of the herring fishery. In Gloucester and Northumberland the catch has been about an average one and the quality better than usual. In Charlotte County, while the catch was good, the quality was inferior, compared with past years.

SMELT FISHERY.

This fishery, which first grew into importance last winter, is now being pursued on a still larger scale, from Shediae to Gloucester; but experience proves that the use of bag nets is very destructive to young smelts, young bass and tom cods, or "frost-fish." From observations recently made in Miramichi, and from evidence collected there, from fishermen as well as officers, I have reason to believe, that for every ton of marketable smelts exported, a ton of small smelts, young bass and tom cods is wasted. It is found impossible to cull them out and restore them to the water alive. This great destruction is much to be deplored, especially that of young bass; which fish, when mature, is of more value to fishermen than any other species. Even salmon brought them last summer only 6c. per pound, while bass are now selling on the ice for 9c. and 12c. per pound. Besides this, the great quantity of smelts caught in bag nets overstock the market, and keep prices so low that there is little or no profit either to fishermen or exporters. It is a question for grave consideration, whether the proper protection of the fisheries will not require the prohibition of bag nets everywhere, for no fishery can long stand the drain so large an annual destruction will make on it. This enormous waste of young smelts and "frost fish," must necessarily have a most injurious effect upon the coast fisheries, for it destroys the food or bait which attracts the deep sea fishes to our coast and bays. When the accustomed supply of food cannot be found, owing to the waste of the anadromous fishes that produce it, the deep sea fishes will desert our coast, and seek in other waters that supply which ours no longer afford. For this reason, the close-time for smelt should commence on the 15th February, and continue until the 1st July, to prevent the waste of spawning smelts, which are now used in great quantities for manure, in all localities where this fish is found. A special report upon this fishery has recently been submitted to the Department, and the facts therein set forth, call loudly for some remedial action.

LOBSTER FISHERY.

The catch of lobsters continues to increase, but the average size of the fish continues to diminish. The increased catch is caused by the larger number of persons engaged in the fishery, to supply the demands of new factories that are constantly being opened. The decrease in the size of the fish is caused by this excessive fishing, and the time is not far distant when the average size will be so reduced, that the business will yield but small returns. In some localities, it now takes about three lobsters to fill a one pound can, and as each of these requires the same, or even more, handling, as a five pound fish, it follows that, while the labour is increasing, the profits are diminishing. The present close-seasons for the several localities have not yet been in operation sufficiently long to enable me to form a correct judgment of their effects. In some places the canners themselves are asking for more protection, while in others, they complain that their operations are impeded by a close-season that commences too early. I still hold the opinion I have so often expressed—because accumulated experience proves it correct—that the close-time is not yet sufficient to give this shell-fish the protection necessary to foster its multiplication and growth.

THE OYSTER FISHERY.

The yield of the beds that now remain is every year becoming less, and the average size of those taken is now so small that there is no profit in the fishery. The close-time is not sufficient to allow the parents to multiply and the young shell-fish to grow, and no natural bed can stand constant raking without being exhausted. As no means of artificial culture have yet been adopted in this Province, the total extinction of the existing beds is not far distant. As I stated in my last annual report, I am convinced that nothing will now save them but a compulsory rest of several years, and as this is the lesser of the two evils,—the other being total extermination,—I am more firmly of opinion that this last resort should be adopted at once.

TRAWL OR BULTOW FISHING.

Complaints against this mode of fishing still continue to some extent, but many of our own fishermen, in self-defence, are now resorting to it, although they consider it injurious to the inshore fisheries, where cod, haddock, hake, pollock and halibut, are becoming scarcer every year. In my last annual report I gave the objections generally urged against the use of trawls, which I now repeat for the information of the Department. First,—these trawls give all our best fish to American fishermen, because of the great extent to which they use them. Second,—they kill a very large number of small and useless fish, that are wasted. Third,—they keep the fish off shore by the large quantity of bait used, and prevent them from coming into bays where our small-boat fishermen can get them. In connection with this mode of fishing, is the baneful practice of throwing gurry or offals on the fishing grounds. The use of trawls encourages this practice, as the vessels will not voluntarily leave the fishing grounds to dispose of it otherwise, and the distance from shore renders it impossible for our overseers to detect and punish the wrong-doers, without a suitable vessel and sufficient help to enforce the law by vigorous measures. The subject is of great importance to the fisheries of the Bay, and I urge its careful consideration with a view to abating the evils pointed out.

ST. JOHN HARBOUR FISHERIES AND DRIFTING FOR SALMON.

In many former reports I have called attention to the manner in which the salmon fishing is pursued both inside and outside the Harbour of St. John. In these and in several special reports and official letters now on file in your Department, I have pointed out the injurious effects produced by the practice of drifting for salmon and have urged its total prohibition. In consequence of the great distress caused by the disastrous fire in June last, you very kindly and considerately concluded to put no restrictions on the catch of this fish, in order that its price might be kept down for the benefit of the sufferers. Advantage was taken of this timely concession, and an unusually large catch of salmon was made by drift nets. This was allowable under the pressure of a great public calamity, but if the practice is allowed to continue unchecked, the worst results must inevitably follow, and the salmon fishery of the whole river must be destroyed. The allowance of this mode of fishing is most unfair to those who, by law, are compelled to take and pay for licenses before they can set a salmon net, because the drift nets in harbour and bay break up the schools of fish and prevent them from entering the rivers. While all other salmon fishers are compelled to pay a license fee, these drifters, under the plea of fishing outside of the jurisdiction of the Fisheries Act, claim exemption from all its provisions. If this plea is good and the Act does not apply to a distance beyond three miles from shore, some additional legislation will be necessary, for should drifting become general throughout the Province, as it will if the above plea is good, the speedy extermination of the salmon is inevitable. The St. John drifters, having depleted their own waters, are ravenous after the compact and unbroken schools of our northern estuaries, which hitherto have been protected from the vandalism of the drift net. All my experience as a fishery officer strengthens my conviction that no possible kind or degree of protection can save the salmon fisheries from destruction if the use of drift nets off the mouths of rivers once becomes common. This subject is of such vital importance to the very existence of the salmon fisheries on our coasts and in our rivers, and it involves such grave consequences to the great body of our fishermen, that I cannot too strongly urge its immediate consideration, with a view to obviate the worst results. It cannot be expected that this great number of fishermen will continue to pay a license fee and obey the laws, while a small number of drifters are allowed the free use of illegal and unlicensed nets in the very mouths of our rivers and in the run of the unbroken schools of salmon that are approaching them.

SAWDUST AND MILL REFUSE.

Complaints still continue to be made of the quantities of mill refuse that find their way into all our rivers. There is little disposition on the part of mill-owners

generally to observe the law, and in consequence of the rapid multiplication of mills, the evil is increasing rather than diminishing. There can be no doubt of the injurious effects of this refuse on the river fisheries, and their preservation loudly demands a strict enforcement of the law.

FISH CULTURE.

In my last annual report I called attention to the great falling off in the fisheries of the St. John River, owing to several causes inseparable from advancing civilization. Among these is the formation of new settlements and the clearing up of the wilderness, the extension of lumbering operations, the multiplication of mills, and increasing fishing. All these causes combined are so altering the old condition of things that it is not surprising to find the fish supply yearly diminishing. The only remedy for this natural result is the extension of artificial hatching. A Salmon Hatchery at some suitable place on the St. John River, whence its several tributaries could be restocked, and the main river receive annual accessions to the natural increase, would tend greatly to restore this fishery, by counteracting the causes of failure above specified. You will perceive by the reports of the several officers that they nearly all urge this as the only mode by which the stock of salmon can be kept up in the seven counties through which the St. John River flows. There is no river in the Maritime Provinces where an extensive hatchery would so well repay the expense of its establishment and support, and I beg to commend the matter to your favourable consideration.

The following remarks on the fisheries of the several counties, and the returns accompanying them compose the substance of the Reports received from the several District Overseers.

RESTIGOUCHE COUNTY.

OVERSEER MOWAT, of the New Brunswick Division of this county, reports the catch of salmon to be ten per cent over that of last year. The license system and the change of the rate from the catch to the net has given great satisfaction, and all have taken licenses and paid the fees without a murmur of discontent. Even those who formerly opposed it, now will give it their approval and support. Neither bass nor smelt fishing is pursued for commercial purposes in this county, although both species frequent the estuaries. The mackerel and herring caught in this division are of good quality. They are used principally for home consumption. The lobster fishery is pursued in the lower portion of the division, but the principal fishing is done on the Quebec side.

OVERSEER FERGUSON, of the Coast Division, reports more than an average catch of salmon, though the fishermen were not prepared for the appearance of the fish so early as the 14th May, and, consequently, did not secure any of the first run; but this made the fishing unusually good in the river. Owing to the increased demand, in consequence of the erection of a freezer at New Mills, and another at Campbellton, the fishermen obtained good prices and prompt payment. He says:—"I am happy to inform you the license system has proved most satisfactory this year, and grumbling has entirely disappeared. The catch of herring has been smaller than usual, which is owing chiefly to a heavy storm that drove the ice in large quantities upon the shores, and prevented fishermen from getting out their nets in proper season. The lobster fishing was much retarded by the destruction of the canning establishment of New Mills, and it was late in the season before it was in a condition to resume work. Codfish and mackerel were plentiful, but our fishermen do not follow these very closely."

GLOUCESTER COUNTY.

The returns from this county show rather more than an average catch in all descriptions of fish except gasperaux, which have been steadily failing for some years.

OVERSEER HICKSON reports that the catch of salmon in the upper part of his district, about Madisco, was very small; but in the lower portion, about Salmon Beach

the catch was the largest known for many years past. So that, taking the whole division through, the aggregate catch was greater than last year. The license fee on the nets is much more acceptable to fishermen than the former rate on the catch, and, though some of them still consider it too high, the guarantee of security contained in their licenses is considered by them a great boon. The river fisheries yielded a better return than last year, and the Nepissiguit was fairly stocked and well guarded. The run of grilse was large, and a good season is looked for next year. The Tête-a-gauche and smaller streams had good stocks of salmon and trout, and but little poaching was practiced. Considerable difficulty was experienced in getting correct returns of the smelt catch, owing to the refusal of shippers to give any information on the subject. In the early part of the season, prices ruled high; the catch was large, the quality good, and both fishers and dealers did a good and profitable business. This continued until the bag nets in Miramichi glutted the markets with large quantities of small and inferior fish, which caused prices to fall from 9 cents and 10 cents per pound to 4 cents and 5 cents per pound for No. 1 fish of the best quality. While the hand-caught fish of this county were bringing the fishermen 4 cents and 5 cents, those caught by the bag nets in Miramichi brought only two cents per pound, and the latter so glutted the market that our shippers ceased to buy, because there was no margin left for profit. Overseer Hickson adds:—"The more I see of the business, the firmer is my conviction that the interests of the fisheries, of the fishermen, and of the dealers, will be best served by the total prohibition of bag nets everywhere. The catch will be smaller, but the quality will be better, and prices realized by both fishermen and dealers will be better; while the wholesale destruction of young and unmarketable smelts, and of young bass will be prevented. Had the bag nets not been stopped in this harbour, and the young fish preserved from waste, the fishing of this winter would not have been worth pursuing. With such waste as the bag nets cause, especially those of such small mesh, no fishery can escape from destruction."

OVERSEER LANDRY, of Pokemouche district, reports a better catch of mackerel, but not so good a catch of herring as last season yielded. This falling off in herrings he attributes to lingering ice on the shores during the time of spring fishing. While the catch of bass has increased, that of gasperaux has diminished, which he thinks is caused by excessive fishing in past years. The cod fishery gave about an average catch, but this branch of fishing is not pursued on so large a scale as the facilities offered would justify. The smelt fishery has grown into large proportions, and this fish is now one of the most important articles of commerce in the district.

OVERSEER SAVOIE, of Tracadie district, reports a good catch of codfish, herring and gasperaux, with a more than usual catch of mackerel, which were very plentiful. The catch of trout was fair, and that of smelts large, until prices fell in consequence of over stocked markets. All the overseers in this county urge the extension of the close-time for smelts till 1st July, to prevent the spawning fish from being used as manure.

NORTHUMBERLAND COUNTY.

OVERSEER WILLISTON, of Bay du Vin and Escuminac district, reports a better catch of all kinds of fish than he has known for the past three years. He describes the great destruction of young bass and small smelts, consequent on the use of bag nets, and is of opinion that this is unavoidable, because the fish die before they can be restored to the water. He recommends that the regulations passed in March last, prohibiting the seining of bass and gasperaux, be kept in force in this district.

OVERSEER ROBICHAUD, of Neguac district, reports the herring fishery to be a failure, owing to the ice remaining in shore late in the spring; but he describes the mackerel and salmon fisheries as yielding a better return than that of last year. The bass fishery is pursued only with hook and line in this district, and in common with all other localities on the Miramichi River where this fishing is pursued, there has been a falling off at Neguac.

WARDEN JOHN DOYLE, the newly appointed officer for Bartibog and Tabusintac head waters, reports that he has prevented much illegal fishing on these streams. A party of two men found by him preparing to spear on the 15th September, pleaded ignorance, and on promising never to repeat the attempt, after the law was read and explained to them, were allowed to go without punishment, Mr. Doyle considering that the object in view, of protecting the fish, would be as well answered by not punishing this first ignorant offence; but he warned them that a repetition of it would be followed by immediate punishment. He reports both salmon and trout as plentiful in the rivers. He reports an obstruction at the mouth of the Eskedillock, a branch of the Tabusintac, famous for its large trout, which prevents their ascent, and he urges the expenditure of a small sum to clear it away and open a passage for the fish. I consider this a necessary measure, as this stream is one of the best angling ones in the Province, and it would be a matter of regret that it should remain closed to the ascent of the fine trout that frequent it.

OVERSEER RUSSELL, of Portage Island and Burnt Church division, reports the catch of salmon nearly double that of last year. Bass have been in great demand by local dealers, and more attention has been paid to this fishery the past season than in former years. In consequence of this, the catch has been three times as great as that of last year. He reports but a small catch of herring, owing to the scarcity of this fish; but as to the cause of this scarcity he gives no opinion. Large preparations were made for pursuing the smelt fishery this winter, and good returns were expected, as the catch last winter was large in proportion to the nets in use. He deprecates the waste of young bass and smelts, but suggests no mode by which this can be prevented, as the fish die before they can be put back into the water. He recommends that the close-season be extended to the 1st July, in order to protect the spawning summer smelts which are used in large quantities for manure.

OVERSEER PERLEY, of Chatham, reports a good catch of salmon, but a very poor catch of gasperaux, shad, and bass. He reports the catch of smelts as very large, but he says nothing of the great waste of young bass, tom cods, and small smelts which has been going on in his district all last winter and up to the present time this winter.

OVERSEER WYSE reports a very poor catch of herrings and lobsters, but a large catch of salmon, especially around the Islands at the mouth of the river. Above these, on both sides, bitter complaints continue to be made of the excessive length of nets in the stands off Portage, Fox, and Bay du Vin Islands, and of the use of swing nets in the former. Petitions for and against the use of these nets have been submitted to the Department, and it is very desirable that they be decided on before the fishing season commences next spring, as the officer having charge of the Portage Island district resides at considerable distance, and it is impossible for him to exercise the necessary supervision over that locality, especially as regards the weekly close-time. Overseer Wyse suggests that the captain of the lightship, which is stationed near that Island and the Horse-shoe shoal, should be made a fishery officer, with special reference to this locality. The suggestion is a very good one, and I think should be acted upon in the coming season. As this officer is provided with suitable boats and an assistant, and as they have plenty of leisure time, the additional duty of looking after this important fishing place can be very easily performed. From Black Brook to Chatham on one side of the river, and from Bartibog to Lower Newcastle in the other side, fishermen complain that the places provided for ballast are not closed in, and that it escapes with every tide and so fouls the water that their nets are rendered useless. In former reports I have called attention to this cause of complaint, and it is very desirable that it be removed by the Harbour Master requiring the ballast ponds to be made tight and secure. Mr. Wyse reports that a considerable number of fisherman, having obtained licences under promises of paying the fee as soon as they realized the money from their first catch of salmon, now refuse payment. This county is the only one in the Province where salmon fishermen are in arrears, because it was the only one in which licenses were issued on credit. The

only cure for this dishonesty is to forbid officers issuing licenses until the fee is forthcoming, and, in the case of these delinquents who are now in arrears, who have broken their promises, to issue them no licenses for next season until that fee and all arrears for last year are paid up. The men who now refuse to pay are well able to do so, and not one of them can plead poverty or inability to do as all their neighbours have done. He describes the smelt fishery as having grown into large proportions; but the bag nets destroy very large quantities of small and unmarketable smelts, and a very large number of bass. Out of the catch of one net on the 15th inst., he collected 500 young bass; out of another net on the 20th inst., 600 young bass were collected; on the morning of the 22nd inst., Overseer Hogan collected over 300 bass from one haul of two nets, and all these were only a portion of the actual quantity destroyed by four nets in three nights' fishing. In no other county in this Province or in Nova Scotia are fishermen so blind to their own interests, nor in any other county would they so foolishly destroy the young stock upon which their future employment and profit depend. Some remedial measure for this shameful destruction is absolutely necessary, for nothing can be hoped from the voluntary efforts of fishermen, as present gain at any future loss, seems to be their ruling motive.

OVERSEER HOGAN, of Newcastle and North Esk district, reports a good catch of salmon; better than for several years past. He says the license system works well, and is more satisfactory to the fishermen than the old rate on the catch. All the fees have been paid in his district, and no arrearages are due. The bass fishery is being pursued very vigorously; the large price obtained for this fish offering great inducements to engage in its capture. He finds it impossible to superintend so large a district without help, and asks permission to employ an assistant for the three months during which this fishery is so largely pursued. All the wardens in the bass district are engaged in the fishery, and are more intent on fishing than on a proper supervision of their limits. Mr. Hogan protests earnestly against the enormous destruction of young bass and unmarketable smelts by bag nets, and expresses his conviction that, if allowed to continue, both the bass and smelt fisheries will be ruined. He also urges the extension of the close-time for smelts from 15th February to 1st July, and the rigid enforcement of the close-time for bass everywhere on the river.

OVERSEER CUSHMAN, of Upper Nelson and Derby, reports salmon plentiful during the whole summer, but gasperaux very scarce; not over eight or ten barrels having been caught where formerly several hundreds were taken annually. This officer reports that: "Close-seasons in my district have been attended to; wardens and myself have been attentively on duty." But he adds that, among the abuses existing in his district are "firing pistols and guns and throwing rocks at and into the officers' canoes; all this is done in the night, so that the parties cannot be recognized." This may possibly account for the numerous complaints that have been made of illegal fishing in this district, and of the ease with which the regulations are said to be violated. The steamer "Andover," which plies on the river through the district of this officer, has several times carried away nets set completely across the channel, and that, too, during the close-time, when no nets should be allowed. Information has been given me by respectable and reliable men that fishing is openly carried on in this district during the close-season, into the truth of which I am now enquiring. The result of this investigation will be submitted to you as soon as completed.

OVERSEER UNDERHILL, of Blackville district, sends the briefest and most meagre report, as follows:—"The salmon fishing has not been as good in my district this year as last. There was a very good run of salmon went up the river this fall. There has been some illegal fishing done from Campbell's Bar to the forks of Cain's River. I think it would be advisable to appoint a warden at Campbell's Bar." From other sources I have very definite information which goes to show that more lawlessness exists in this district, and more illegal fishing is done there, than in any other division on the whole course of the river; and as this is the key to all the upper waters, it is most important that the regulations should here be vigorously enforced. Spear-ing, drifting, Sunday fishing, and illegally set nets are the rule in this district, which

could not possibly exist if the overseer and the wardens under him did their duty. The remedy is beyond my reach, and the evil requires to be dealt with from headquarters.

OVERSEER THOMAS TAYLOR, of Blissfield district, reports a smaller catch of salmon than he has known for any season since he has been an officer. He attributes this to two causes: first, the great quantity of logs running in the early part of the season; second, the extent to which illegal fishing is pursued in Blackville, the division immediately below, in consequence of which it is almost impossible for a fish to pass it. He urges a better supervision of the wardens in Blackville and Derby, and a more strict attention to their duties on the part of the overseers and wardens of these districts. He says:—"It seems to be of little use for an officer in one district to be at his post, while others are very derelict in their duty. The fishermen praise the negligent and persecute the diligent. To my certain knowledge, in one district below me, several persons have been allowed to fish as they pleased." Overseer Taylor asks permission to purchase a canoe, to enable him more conveniently to get over his district. As this request is reasonable and the canoe is much needed, I would recommend that he be authorized to procure one.

OVERSEER FREEZE, of Doaktown, also reports very few salmon in his district. The extreme lowness of the water offered great facilities for poaching in the parish of Blackville, and but few fish could pass the bars and shoals that abound in that part of the river. He reports Gaspereaux as nearly extinct in this district, where formerly large quantities were caught every spring. The seines have effectually done their work of destruction, and nothing but the most careful protection will now save the remnant that is left. My conviction is that nothing short of a few years' rest from fishing, even with set nets, will enable the small stock that is left to successfully fight the battle of existence.

OVERSEER CAMERON, of the upper district of the south-west, reports a great falling off from the catch of last year, both in salmon and gaspereaux, the only migratory fish that reach the head waters of the river. Of the latter, not five barrels were caught, and for all practical and useful purposes, the fishery is extinct, as its pursuit will not repay the cost of material and labour. The decrease in salmon he attributes to the excessive fishing and poaching in the lower districts. He expresses his surprise that a single salmon got up to his division, and states his belief that were it not that the first run ascend while the freshet is too high to allow nets to be set, or spears to be used, the upper pools and spawning beds would be without a single fish. The few that reached the pools afforded but indifferent angling this season—the number caught not amounting to one-half of what was taken last year. Mr. Cameron states his belief that every year will be getting worse, as long as nets are allowed so high up the river. As I have always plainly stated my convictions that nets should never be allowed on the spawning grounds of salmon, I must agree with Overseer Cameron, that as long as they are allowed there, the fish will become scarcer. This is no mere theory, but a conclusion founded upon the experience of ten years and a mass of facts that can neither be denied nor explained away. In my last annual report of the state of this division, which was not nearly so bad as that now described by Overseer Cameron, I concluded as follows:—"In no other river in the world, that I am aware of, are salmon allowed to be netted on their spawning beds, after running the gauntlet of innumerable nets from the mouth of the river, upwards. The comparatively few fish that reach their accustomed spawning grounds after escaping the toils that beset their ascent from the time of entering the river, should be allowed to perform procreative functions undisturbed. In former reports I have expressed this conviction, and every year's experience only strengthens it."

KENT COUNTY.

OVERSEER SUTHERLAND, of the upper division, reports the catch of salmon in this county as less than that of last year. Gaspereaux were so scarce that he calls this fishery a failure; but lobsters were plentiful, and the business was largely pursued.

In consequence of the small catch of salmon, more attention was given to cod and mackerel, and the quantities caught of these were much in excess of previous years. But these branches of fishing are not pursued as vigorously as the facilities offered would justify. The fishing grounds are only a short distance from the harbour, and on the completion of the breakwater now in course of erection, schooners and boats will have good shelter in any gale. The smelt fishery has not been so largely pursued; low prices and overstocked markets rendering it less remunerative than formerly. Overseer Sutherland recommends the prohibition of bag nets to prevent the great destruction of small smelts, and the extension of the close-time to 1st July, to prevent their use as manure.

OVERSEER CORMIER, of the lower districts, reports an increase in the catch of all kinds of fish, except spring and fall herrings. The falling off in these he attributes to unfavorable weather. He reports the oyster beds as rapidly failing owing to constant over-fishing. The close-season is not sufficient to foster their growth, and no means have yet been taken to increase the supply by artificial culture.

WESTMORELAND COUNTY.

OVERSEER DEACON, of Shediae division, reports a good catch of lobsters, which is the principal fishing pursued in his district. His returns show a large increase over last year. There are now three canning establishments in operation, and two new ones are being erected. He says: "On consulting with the proprietors of these, I find them all anxious to have the close-season from the 20th July to the 15th August, which would be one month earlier than it is at present, and I would strongly recommend the change to be made." He reports the oyster beds as nearly extinct, and says:—"On the 22nd August, I employed two men and a boat to test the oyster beds. I tried five, and during the afternoon I did not get over two dozen. Unless something is done to preserve them, all will, in a short time, become helplessly extinct." He reports salmon as steadily increasing in the Shediae River.

OVERSEER DAVIDSON, of Bay Verte district, reports the herring fishery as unusually good last spring at Bay Verte and Bay Side. The fishways in the dams across Tidnish and Port Elgin Rivers, will now enable gaspereaux to ascend, and he anticipates a large increase in this fish in future; but I much fear his hopes will be disappointed if the fish are allowed to be taken for the first three years after their return.

OVERSEER CORMIER of Dorchester Bay division, reports an average catch of shad, but the fish were not so large as usual. The decrease in size was more observable in those caught during the last of the season. Mr. Cormier is of opinion that the brush weirs in the district below are injurious to the fishery in consequence of the number of small fish destroyed by them. He recommends that weir-owners be compelled to provide openings with covered nets of a mesh sufficiently large to allow the small fish to pass through. But experience in other places shows that this does not accomplish the end in view. The fish keep together and will not sift through; the receding tide leaves the weirs dry, and all its contents, large and small are taken. There is no doubt that these brush weirs are a destructive mode of fishing, and in view of the falling off in the shad fishery everywhere, it is a matter to be considered of your Department whether it will not be advisable to prohibit them, and confine shad fishing entirely to net. By this mode, all the small fish will escape and go to keep up the supply. Of the few salmon that still frequent the head of the Bay of Fundy, considerable numbers are taken in shad nets, and this effectually prevents their increase in the Petitcodiac River.

ALBERT COUNTY.

OVERSEER AKERLEY reports an increase of salmon and shad in this county, which are used almost entirely for home consumption. Herring and Gaspereaux are caught in small quantities, and line fishery is pursued to a limited extent; but the business is not followed for commercial purposes, the people being mostly engaged

in lumbering and agriculture. The fishways in the county have been kept open during the proper seasons, but in Pollet and Coverdale Rivers they do not appear to be of much use, as the salmon that now frequent them are few in number and small in size. The great increase of lumbering operations on these rivers since the railway has given it an outlet, has wrought such changes that no hope remains of ever restoring them, and Mr. Akerley is of opinion that they ought to be exempted from the operation of the Fisheries Act, as the lumbering interest is now of much greater importance than any fishery interest that remains or can be restored. I fully agree in this opinion for the maintainance of fishways on these rivers is a source of expense to mill-owners, but of no perceptible benefit to the people.

VICTORIA COUNTY.

OVERSEER MCCLUSKEY reports the smallest catch of salmon and shad that has ever been taken in that county. Twelve barrels of salmon and six of shad comprise the sum total of the returns. When it is considered that the Tobique River was formerly the great spawning ground for St. John salmon, and that below its mouth and all along its course large quantities used to be taken, it will be seen how great is the falling off, and how serious is the danger of their total extinction in that river. This danger is increased by illegal fishing and spearing salmon in its upper waters. Overseer McCluskey says it is all but impossible to detect and prevent this, in consequence of the great extent of wilderness and the distance between the wardens. I would strongly urge, as I did in my last report, that Mr. McCluskey be authorized to employ several special guardians next season, who should camp on the river, in these wilderness portions, and remain there until after the spawning season. I know of no other means of arresting the depredations of lawless men, and protecting the breeding fish, which it has now become more important to do than it ever was before.

CARLETON COUNTY.

OVERSEER HARRISON, of this county, reports as follows:—"I am sorry to have to say that there continues to be a falling off yearly in salmon, shad and bass. The latter appear to have left this part of the river altogether. Very little salmon fishing has been done in the county this season, and the fishermen say that they cannot catch enough to pay for the labour of setting and tending their nets, as the sawdust and mill rubbish fill them up almost as soon as they are set. Those who did anything went down to York County and fished there, and I am told that some of them did pretty well. Overseer Brown told me that there was a fair run in York, but very few of them now come up to Carleton. As long as the mill-owners are allowed to throw their sawdust into the water, it appears to me it will be useless to try to protect the fisheries in this county. I have called your attention to this difficulty in all my former reports, but the trouble is getting worse year after year."

YORK COUNTY.

WARDENS BROWN and CAMPBELL's reports from this county are but a repetition of their remarks last year. Fishing has been even worse, and still fewer men have pursued the business. The same complaints are made of the bad effects of mill refuse and sawdust from mills in the upper county. There seems to be but little use in enforcing the law in one county, while the mills above do as they see fit. Until the law is rigidly enforced in all counties alike, Mr. Brown sees no hope of any improvement. I repeat here the closing remarks of his last year's report, in the hope that some action may be taken next season:—"I would, therefore, urge that the law relating to sawdust and mill refuse be strictly enforced throughout the whole length of the St. John River, and that every man, whether rich or poor, be dealt with alike."

SUNBURY AND QUEEN'S COUNTIES.

OVERSEER HOBEN reports an increase of salmon fishing in Queen's County since the license fee has been rated on the net in place of the catch. While the take of shad is diminishing, that of bass is increasing, and those taken by hook and line

often weigh from thirty to thirty-five pounds. Gaspereaux are yearly becoming scarcer, the catch last season did not reach one-half the average quantity. The river fishermen attribute this to the recently built breakwater at Negro Point, at the entrance of St. John Harbour; but this is evidently not the cause, for the catch on the *outside* of this shows a large falling off from previous years. The real cause of this decrease is the over-fishing which is commenced outside the harbour, and is pursued as far up the river as the fish ascend, and as long as they remain. The fish caught in these counties are used wholly for home consumption, and as almost every settler has some kind of fishing tackle, and catches more or less fish for his family's use, it is very difficult to get at the aggregate quantities caught; the returns given are, no doubt, short of the truth.

OVERSEER HETHERINGTON of Washademoak and Canaan district, reports a great falling off both in shad and gaspereaux. This, he very correctly attributes to the real cause—overfishing, both in the harbour of St. John and at the north of the lake. Bass, he reports as increasing in numbers since the close-time has been enforced. Salmon were more plentiful than they have been since 1836, but as their past scarcity had made it unprofitable to prepare nets for their capture, the people along the lake were not provided with means to take them. As they did not reach the rapids on Canaan River until the close-season had commenced, they had free passage to their spawning grounds, and could be seen in large numbers in the pools. Mr. Hetherington says: "I have visited every stream of importance, and find that Providence is doing much to bring about a return of salmon, by sweeping away the dams that have barred their ascent to their accustomed spawning places. I am happy to state that I find a disposition on the part of most of the millowners to do what they can to keep refuse and sawdust out of the streams. At Grand Lake and Salmon River the law is not as well observed as it might be, and an overseer in this locality, who will fearlessly do his duty, is much needed. If a salmon hatching house could be established on the Main River, and a few thousands of young fry distributed every spring among the tributaries that formerly were good streams for salmon, I think they would soon be restocked, and assist very materially in keeping up the supply of this valuable fish, which, I regret to say, seems to be getting scarcer every year."

KING'S COUNTY.

OVERSEER DEVEBER of Westfield and Nerepis district, reports a better catch of salmon than that of last year, which was very small. Shad were very scarce, and gaspereaux a total failure. Both these species have been failing rapidly in numbers for some years, and their decrease, especially that of the latter, is a great loss to the people of the district, who have always considered the gaspereaux as a great boon, being the first fish that enters their water in the spring, and coming as it does, just as their store of winter provisions is consumed, it enters largely into the consumption of many families. This year they did not catch sufficient for home use, while formerly they were able to send considerable quantity of smoked fish to the St. John market. Mr. DeVeber rightly attributes the falling off to overfishing and the great destruction of young fish which was formerly caused by the weirs in the St. John Harbour. This cause of complaint is now removed; but there is not much prospect of the stock being increased in the face of such excessive fishing as is now pursued along the whole course of the river. He says:—"I have no hope of a permanent increase in salmon. The only thing that will, in my opinion, ever replenish the waters of the St. John is a hatching house, located at some suitable place on the river, from which the several tributaries can be supplied with young fish," and he urges on your Department a favourable consideration of the matter.

OVERSEER GOSLINE reports a similar decrease of shad and gaspereaux in the Kennebecasis and Hammond Rivers. He says:—"There seems to be but small hope of restoring these as salmon rivers, although a considerable number still ascend both. The facilities for killing them in the shallow pools are so great, and the disposition on the part of the settlers to protect them is so small, that but few escape. The

young fry that were placed in the upper waters of the Kennebecasis in the spring of 1876 did well, and large numbers of parr and smolts were to be seen, this summer, but I fear most of them have been caught by the boys with hook and line. It is simply impossible to prevent this by coercive measures, and until a better state of feeling is shown by the residents, and more enlightened views inculcated on their children, I doubt if it will be of any use to contrive to supply fry that will have but small chance ever to become salmon." I fully agree with Overseer Gosline, and as the restocking of these streams would be solely for the benefit of the farmers and residents who own the lands bordering on them, and since these show no interest in the matter, and do not seem to give the experiment even their moral support and assistance, I cannot advise that any further attempts be made to confer on them a benefit which they appear to value so lightly, and appreciate so little.

ST. JOHN COUNTY.

The great bulk of all the fishing in this county is done outside and inside the Harbour of St. John. Salmon, bass, shad and gaspereaux are the principal fish caught, and these are taken by drift nets and weirs. Both these modes of fishing are destructive, and, as regards salmon, drifting is illegal, being forbidden by the Fisheries Act. In consequence of the great distress and privation caused by the disastrous fire in June last, no restrictions were placed upon fishing, in the hope that cheap fish food would be supplied to the sufferers. The consequence was that more than an average catch of salmon was made.

OVERSEER O'BRIEN states that in the bay, outside the harbour limits, and at distances varying from three to ten miles from the shore, there was about 75 boats between Partridge Island and Lepreau, with about 500 fathoms of net to each boat. This enormous string of meshes, equal to 42 miles, almost constantly in the water, made it impossible for any quantity of salmon to get past them, and hence the fishing, both in harbour and river, was very poor. Gaspereaux fishing was a failure, being about the poorest ever known, and although the weirs were with great difficulty kept closed Saturday nights and Sundays, still the numbers that ascended the river were smaller than usual. There can be no doubt that past overfishing has seriously diminished the stock of this valuable fish. The herring fishing in the bay the past year has been the best ever known, and several additional vessels are now fitting out for the coming season. Overseer O'Brien concluded his report with the following remarks:—"The growing business of the port, the increasing traffic of tug and ferry steamers and vessels of all kinds, about the harbour, together with the outflow from sewers and the discharge from the gas works, will doubtless cause a falling off in the harbour fisheries, and many old fishermen affirm that they are already very seriously decreasing from these causes."

OVERSEER SKILLEN, of St. Martin's district, finds it impossible to get full returns of the catch in his division this year, because a large number of small vessels that resort there to fish never come to shore, but, having made their fares, left for home or a market. He reports the fishway at Salmon River a great success, and gives a just meed of praise to Mr. E. H. Foster, the manager of the mill, for his care and attention in keeping it clean and bushy and easy of access. Large numbers of fine salmon have been seen above the dam, and there is every reason to believe that this fine river, so long closed to the ascent, will soon become as famous for salmon as it was when the abundance of the fish gave it the name it bears. No impediment now exists to prevent the frequent ascent of fish in Mosher's mill stream, and numbers of salmon have this fall gone up to spawn. Nothing in the shape of mill refuse, except a small portion of sawdust, is now allowed to go adrift from any of the ten mills in this district. From the construction of these mills it is impossible to prevent this, and I do not consider it necessary to put any serious difficulty in the way of the milling interest. Overseer Skillen has accomplished a great work, and I have much pleasure in bearing testimony to his energy and his attention to the onerous duties of his office.

CHARLOTTE COUNTY.

OVERSEER CURRAN, of St. Croix District, reports a considerable increase in all the fish frequenting the waters of that division. He says: "The fishways, seven in all are in good working order, and have been kept so during the past season. The increase in salmon has been very noticeable, and they have now established spawning beds in the several tributaries of the St. Croix. Alewives still continue to increase, and this season have been of larger size. Considerable quantities have been taken all along the Denis stream. I have succeeded in getting a new fishway in the dam at Sherman's Mills, which will give greater facilities to the ascent of the fish and open up new spawning places at the head of the stream. We had an unusual run of mackerel in this district, a thing unknown for years. Large quantities were caught and cured for home consumption, and our towns were well supplied with fresh mackerel sold in the streets. Lobsters have been a marketable article in their season, their size being larger and their quality better than usual. This year the American authorities have appointed an overseer on their side of the river, and he is energetically enforcing regulations which have been so long entirely neglected. In consequence of this, much of the mill refuse from the American side has been kept out of the river, and the weirs have had a much better catch of fish. There was an increase in the number of weirs, and a still large number will probably be built next year. The tax has been paid without complaint, and I allowed fishing on Tuesday and Friday of each week, which enabled the people to get all they wanted for home use. I must again call the attention of the Department to the great need of a fishway at Salmon Falls. It is the only place on the river where the fish have not now a free passage, and I would recommend the construction of one immediately." I regret to inform you that, since writing his report, Overseer Curran has departed this life, and the fishery service has lost one of its most intelligent and faithful officers. Devoted to the work in which he has been so many years engaged, Mr. Curran gave to the service indomitable perseverance, unwearied patience and much intelligence. When he commenced his duties not a fish could ascend the St. Croix beyond Baring; both salmon and gaspereaux had become almost extinct in a river which formerly teemed with them. He achieved his most earnest wish and he lived to see the fruits of his labours. His reports show how much the well-directed efforts of one faithful officer has been able to accomplish in the face of opposition that might well dishearten even a more sanguine man. He has left behind him the best record of his faithfulness as an officer and his usefulness as a citizen. More pretentious men than honest Pat. Curran might well be proud of the monument his own efforts have erected to his memory. He has opened and restocked with two most valuable food fishes, one of the finest rivers and two of the largest chains of lakes in the Dominion. It now devolves on his successor to preserve his work, and it will require a man of no ordinary ability to fill his place.

OVERSEER CUNNINGHAM, of Inner Passamaquoddy Bay, reports a decrease in the catch of herring; but as prices were better than last year, fishermen have not lost. A new branch of industry is likely to arise in all the herring districts of Charlotte. The small herrings which formerly were pressed for oil and pumice are now being cured as *sardines*, and, so far, the result has been satisfactory and profitable. Mr. Cunningham says it is contemplated to start an establishment for the cure of sardines in his district next summer. Mackerel have been more plentiful this year, and a considerable catch was made. Haddock and hake have given about an average return, but complaints are still made of the use of trawls or bultows. Pollock have been plentiful this year, and the returns show a larger catch. The lobster fishery has largely increased in this district. Last year 48,000 cans were put up in St. Andrews; this year 76,800 cans were turned out, and an increase of 35 tons was made in the quantity sold fresh for American markets. The close-season was strictly observed, but it required constant attention on the part of the overseer to prevent spawning and undersized lobsters from being destroyed. Trout fishing in the Chamecook Lakes was very good, and a movement is on foot to stock them with "land-locked

salmon" from Grand Lake, on the St. Croix. If this project can be successfully accomplished,—and the only difficulty is the protection of the fish—these lakes will become the best angling waters in the Province. Overseer Cunningham complains that his salary is not sufficient remuneration for the work his district requires of him; and as he is a good, faithful, intelligent officer, I think his services entitle him to favourable consideration.

OVERSEER BEST, of Beaver Harbour and Latète district, reports a good catch of all kinds of fish; but the largest increase is in herrings, of which the catch was very large. Cod, hake, and haddock have given good returns, but Mr. Best complains that bultows or trawls are having injurious effects on all line fishing, and that American vessels throw offals upon the fishing grounds.

OVERSEERS LORD and BROWN, of West Isles, report a good yield of the several fisheries in their divisions. The catch of pollock has been exceptionally large. Cod and hake have also given good returns, but haddock has not been so plentiful, which they both attribute to trawl fishing outside. There has been a large falling off in smoked herrings; but this does not arise from any scarcity of fish. A new and more profitable market has been found for them, and large quantities have been taken to Eastport, where they are put up as sardines. This new mode of curing will make the fisheries much more profitable to their owners. Lobsters were plentiful, and have increased much since the factory at Deer Island was closed some years since, but the catch has not been very large. Overseer Lord complains that his duties occupy much of his time, and that the salary he receives is not remuneration sufficient for the work done. This district is an important one, and his services are valuable. I would respectfully commend his case to your favourable consideration.

OVERSEER McLAUGHLIN, of Grand Manan district, furnishes, as usual, a long and interesting report, the main portions of which I give in his own words. He says:—"I have the pleasure to report an encouraging increase in all branches of the fisheries in my district, except in smoked herrings, which, compared with last year, show a large decrease. The catch of cod, pollock, hake, haddock, herrings fresh and pickled, and lobsters equals, if it does not surpass that of the best year's on record; in fact, line fishing has been good all the year round, with good fishing at the present time (31st December). Net fishing for herrings was exceptionally good the first six months of the year; since which, there has been a gradual falling off in quantity, with an extraordinary leanness in quality. I am told by American fishermen, as well as our own, that mackerel also are lean and poor in quality this year. I am at a loss to account for this leanness in herring and mackerel, unless it arises from an exceptional absence of fish food in our waters, which may also account for the comparative scarcity of both these fish in North American waters for the last six months. Would it be possible that a scarcity of fish food on the coasts of North America has compelled the herrings to resort to the northern coasts of Europe? If so, we may easily account for the return of great shoals of herrings to the waters of Denmark, which has been reported in European newspapers and trade returns. The increase in lobster fishing is encouraging. Last year two cannery houses put up 120,000 cans; this year there is but one house, and yet the increase is 30,000 cans, with fewer hands employed in the fishery. This is the best proof that can be offered of the great importance of a proper close-time, which should, in my opinion, commence 15th July instead of 1st August. Warden Gilmour has been vigilant in the performance of his duties at North Head. He is still in need of a suitable boat; the allowance of \$30, which was made for this purpose, is insufficient to procure a suitable boat for the service. I tried, in Grand Manan and St. John, to purchase one, but could not get one that would be of service in our waters for less than \$100. I hope the Department will see the necessity of this expenditure. I have had no complaints from Whitehead Island, and therefore I have no doubt that Warden Carroll has attended to his duties. The only part of my division that now suffers from the visits of predatory fishermen, is the "Three Islands." Isolated as they are, being situated about six miles from my residence, at the spawning grounds,

their harbour makes a snug retreat for fishermen who seem to take a pride in being lawless. More than seventy-five fishing vessels found shelter in this small harbour during the fall months. As my attention is almost constantly required to look after the spawning grounds and lobster fishery, and as the sea is generally very rough between the mainland and the "Three Islands," my boat is too small to allow me to visit the place as the interest of the fisheries requires. Consequently, the fishermen often behave in a lawless manner, both as regards the Fisheries Act and the rights of the proprietors of Islands. I therefore respectfully suggest that Mr. David Ingalls, the owner of two of the Islands, be appointed warden of "Three Islands," to serve under instructions from the overseer, with a small salary, say \$30 per annum. Mr. Ingalls is an honest, upright man, and often suffers from the illegal acts of the fishermen who frequent the locality. As he is supplied with boats, and always has a number of men in his employ, he can easily enforce the law if he is commissioned to do so. With the exception here mentioned, the law is well obeyed, and good order reigns throughout my district." I am aware of the facts mentioned by Mr. McLaughlin, and I believe that the appointment of Mr. Ingalls will be of great service, and be the means of putting a stop to the last remnant of disorder that now remains in Grand Manan. I would therefore respectfully urge that Overseer McLaughlin's request be at once acceded to, so that the new warden may enter upon his duties at once. The small outlay of his salary will be well repaid by the important services he will render.

A perusal of the foregoing reports will show several important facts that require consideration from the Department. They show that there is a very serious falling off in the stock of all the anadromous fishes that frequent our rivers. They show that this decrease has been caused by over-fishing and insufficient protection; that these causes are still actively at work—the fishing increasing and the protection becoming less—while all the causes of diminution that follow in the train of rapidly increasing settlement, are in full activity. They show that everywhere the stocks of shad and gaspereaux are in imminent danger of extermination. They show that the bass and smelt fisheries are being conducted in most wasteful and destructive modes. They show that the harbour and river fisheries of St. John cannot possibly stand much longer the annual drain made upon the rapidly decreasing stocks. They show the oyster beds all but extinguished. But they also show that proper close-seasons and due protection to the breeding fish, foster and increase the supply. As all experience in this and in other countries proves that nothing is to be hoped from the foresight or prudence of fishermen, nor from their voluntary adoption of any of the means that will protect and prolong the supply; that they will continue this over-fishing and these wasteful modes of fishing that have been described in the foregoing pages, the question that presents itself for your consideration is this: Which is most advisable—that such protection as is necessary to preserve the fisheries from sure destruction shall be made compulsory and fishermen be called on to submit to what will be only a partial deprivation, and perhaps only a temporary one—or, that they be allowed to go on in the old wasteful ways, with the certain result, that ere long, they will be compelled, by a law of nature from which there is no appeal, to submit to a total and permanent deprivation of this great gift of a beneficent Providence, and one of their great sources of employment and wealth; a deprivation from which no earthly Government can save them; from which no Department can extricate them, and which no unavailing regrets will ever restore them? The question is not a difficult one to decide; and although most of the fishermen will protest against measures which are for their own benefit, and ignorantly or selfishly strive to prevent their adoption, still I am persuaded that a large number of them are intelligent and sensible enough to see that this is the least of two evils, and that by cheerfully submitting to it, they will avert the greater one and escape the consequences that they see clearly enough are inevitable under the present mode of carrying on the fisheries. Long before I was a fishery officer I had given this subject much thought, and from youth I have had exceptionally good opportunities of

observing it. Since I have been an officer I have given the service my best efforts, both physical and mental. I have laboured to investigate and understand the natural history and habits of our several varieties of fishes; I have tried to trace the causes that have led to their yearly decreasing numbers; I have given faithful and true reports of facts as I have found them in the several localities where the fisheries are carried on, and I have submitted the conclusions arrived at after mature and deliberate thought. These conclusions are in keeping with those adopted by much abler men in other countries, where the same causes have produced the disastrous effects I am striving to have averted. These reports and these conclusions are on record—they speak for themselves—the former can be verified by all who will take the necessary trouble, and the latter can be judged of by all who have given the subject the necessary attention. For doing this I have incurred much ill-will from those who see in an honest officer only a personal enemy; much misrepresentation and abuse from those who have sought to make political capital out of the dissensions and conflicting opinions of a class of men not very tolerant of interference at any time, but much less so when their prejudices have been excited and they have been led to believe that both the Government and its officers are inimical to their interests. I appeal to the record and ask to be judged by my work.

I have the honour to be, Sir,
Your obedient servant,

W. H. VENNING,
Inspector of Fisheries, N.B.

Hon. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

No.

**RETURN showing the Number, Tonnage and Value of Vessels and Boats
and Quantities of Fish, and the Total Number of Men employed,**

12.

engaged in the Fisheries; Quantity and Value of Fishing Material; Kinds &c., in the Province of New Brunswick, for the Year 1877.

KINDS OF FISH.										FISH PRODUCTS.		VALUE.																									
Herrings, Smoked, in boxes.		Alewives, barrels.		Cod, cwt.		Cod Tongues and Sounds, barrels.		Pollack, cwt.		Hake, cwt.		Haddock, cwt.		Halibut, lbs.		Shad, barrels.		Bass, lbs.		Trout, lbs.		Smelt, lbs.		Eels, barrels.		Oysters, barrels.		Lobsters, in cans.		Fish Oil, gallons.		Fish Guano, tons.		Fish used as manure, barrels.		\$ cts.	
.....	1000	1000	33,160 00									
.....	1000	.....	.....	.....	1000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29,370 00
.....	1000	.....	.....	.....	1000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$62,530 00

KINDS OF FISH.										FISH PRODUCTS.		VALUE.					
.....	9500	32600	1002	4650	26000	2700	17880	139^8	164800	187	700	245360	18340	334,375 28
.....	6600	6600	100	150	500	1000	300	2000	20000	.....	800	.....	4500	500	.....	47,425 50
.....	120	200	.....	.....	.....	.....	5000	1500	50000	60	.....	.....	150	.....	.....	8,077 50
.....	500	3600	.....	650	26000	2700	3700	9500	28000	128	50000	3100	.....	.....	.....	46,386 00
.....	3120	43000	1102	5450	52500	6400	26880	26908	262800	375	1500	295360	26090	\$436,264 28

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.								FISHING MATERIAL.			
	Vessels.				Boats.				Nets.			
	No.	Tonnage.	No.	Men.	No.	Men.	Fathoms.	No.	No.	Value.	Weirs.	
<i>Northumberland.</i>												
Tabusintac Bay and River					11	50		11	890	295		
From Neguac Island to Burnt Church	1	12	400	3	50	1500		100	4100	1400		8620
From Portage Island to Lower Newcastle	2	45	1100	4	96	1644		86	18975	9375		187960
Point Escuminac	25	125	1250	100	60	1200		90	5000	5000		5
Hucklebury, Egg, Fox & Bay du Vin Islands and Bay ..	50	250	2500	200	79	1580		106	11936	11936		256720
Napan and Black Rivers.....								*36	1080			2350
From Bay du Vin to Beaubair's Island..	1	6	200	2	50	600		140	7158	3300		63870
From Chatham Ferry to Head Waters North-West.....												61053
From Beaubair's Island to Blackville					41	410		41	1273	636		36000
Blackville Parish					34	393		14	656	372		108
Blissfield					9	36		18	179	895		1800
From Doaktown to Hovey Island									1509	750		1000
From Hovey Island to Burnt Hill.....					10	120		10	182	50		580
Total.....	79	438	5450	309	440	7533		636	51849	35089		113
												647603
												2350
												31060
												227
												16140

* Bag nets.

Boats engaged in the Fisheries, &c.—New Brunswick—Continued.

KINDS OF FISH.											FISH PRODUCTS.		VALUE. \$ cts.							
Herrings, barrels.	Herrings, Smoked, in boxes.	Alewives, barrels.	Cod, cwt.	Cod Tongres and Sounds, barrels.	Pollack, cwt.	Hake, cwt.	Haddock, cwt.	Halibut, lbs.	Shad, barrels.	Bass, lbs.	Trout, lbs.	Smelt, lbs.	Eels, barrels.	Oysters, barrels.	Lobsters, cans.	Fish Oil, gallons.	Fish Guano, tons.	Fish used as manure, barrels.		
47	50	47	47	50	50	50	50	50	50	500	1000	4000	7	313	1500	50	50	1,284 00		
300	50	300	300	50	50	50	50	50	50	7732	500	27400	7	313	2400	2400	50	3,656 00		
50	10	50	50	10	125	400	10	7650	7650	5700	300	25000	3500	84520	750	21000	550	50	31,116 92	
1005	625	1005	1005	625	125	400	10	7650	7650	1000	360000	3	3	3	3	3	3	3	17,839 25	
2500	70	1501	1501	70	365	80	80	5700	5700	300	240000	105938	130	130	130	130	130	130	130	89,742 75
	70			70				1000	1000	360000		1000	3	3	3	3	3	3	3	22,037 00
	64			64			5	4069	4069	240000		4069								24,584 64
								105938	105938	130	130	130	130	130	130	130	130	130	15,535 53	
	10			10				15	15	1000	400	1000	1000	1000	1000	1000	1000	1000	1000	5,714 00
	78			78				116	116										432	3,154 00
																			270 00	
	2			2															160 00	
	5			5															112 00	
3855	356	2176	2176	356	490	400	226	133589	133589	2330	657400	112	3813	109420	1350	482	215,206 09			

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.					
	Vessels.			Boats.			Nets.			Weirs.		
	No.	Tonnage.	\$	No.	Value.	Men.	No.	Fathoms.	\$	No.	Value.	Salmon, barrels.
<i>Kent.</i>												
From Shediac to Richibucto.....	18	123	1550	54	550	8250	1100	30800	15400	.....	1200	.....
From Richibucto to Es- cuminac	4	130	1950	8	132	2650	595	7500	6940	440	675	107000
Total	22	253	3500	62	682	10900	1695	38300	22340	440	675	108200
<i>Westmoreland.</i>												
Dorchester Bay and Cumberland Basin to Shepody Bay.....	2	30	100	38	39	78	91	14400	2255	.....	142	.....
Bay Verte to Cape Tor- mentine.....	.....	.....	.....	151	320	63	1175	940	.....	.....	.....	.....
Shediac River to Cape Jourimain .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	300	35000
Total	2	30	100	54	398	154	15575	3195	.....	142	.....	300
<i>Albert.</i>												
From Hopewell to Point Wolfe River.....	.....	.....	23	920	60	3200	1460	11	975	35	.....	.....
<i>Victoria.</i>												
From Carleton Co. line to Grand Falls .....	.....	.....	.....	.....	.....	70	60	.....	12	.....	.....	.....
<i>Carleton.</i>												
Carleton Co., St. John River .....	.....	.....	15	120	15	345	120	.....	.....	4664	.....	.....
<i>York.</i>												
From Sunbury Co. line to Carleton Co. line .....	.....	30	180	30	275	275	275	.....	.....	3619	.....	.....

Boats engaged in the Fisheries, &c.—New Brunswick—Continued.

RETURN showing the Number, Tonnage and Value of Vessels and

Boats engaged in the Fisheries, &c.—New Brunswick—*Continued.*

RETURN showing the Number, Tonnage and Value of Vessels and

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.								FISHING MATERIAL.								
	Vessels.				Boats.				Nets.				Weirs.				
	No.	Tonnage.	Men.	\$	No.	Men.	\$	Value.	Fathoms.	No.	Men.	\$	Value.	No.	Men.	\$	Value.
<i>Charlotte.</i>																	
St. Croix District.....					2			20				11	*1100				
Inner Bay.....																	
Passamaquoddy.....	8	130	3200	34	36	2900	72	3000	1300	1	400					335	2900
Lepreaux.....																	
Beaver Harbour and																	
Latète.....	32	449	13100	158	106	3150	212	21200	10600	2	1000						36950
Deer Island.....	18	468	9000	144	245	13000	250	16000	10200	20	8000						8000
Campo Bello	16	269	5650	92	117	4731	213	4805	4805	23	2300						2843
Grand Manan.....	18	500	13000	95	350	30000	340	14000	13000	25	12500					25	30000
Total.....	92	1816	43950	523	856	53781	1107	59005	39905	82	25300					360	80693

*Brush.

Boats engaged in the Fisheries, &c.—New Brunswick—*Continued.*

KINDS OF FISH.										FISH PRODUCTS.			VALUE.	
Herrings, Smoked, in boxes.		Alewives, barrels.												
		Cod, cwt.												
			Cod Tongues and Sounds, barrels.											
		Pollack, cwt.												
				Hake, cwt.										
					Haddock, cwt.									
						Halibut, lbs.								
							Shad, barrels.							
								Bass, lbs.						
									Trout, lbs.					
										Smeit, lbs.				
										Eels, barrels.				
										Oysters, barrels.				
										Lobsters, cans.				
											Fish Oil, gallons.			
												Fish Guano, tons.		
												Fish used as manure, barrels.		
													\$	cts.
600														3,000 00
1500	40			180	400	10000			1300					35,231 75
1000	3450	304	3300	8400	782200					500	8835			237,120 75
45500	2800	10	3000	4500	280000	1000				5500	16000	300	400	107,380 00
44550	355		2936	3635	3212					5329	12560			59,702 02
425000	10500	10	12000	15000	280000	100000				150000	50000	500	2500	445,245 00
517550	640	17105	504	22416	31935	1355412	101000	1300		249454	90595	890	4419	887,679 52

RECAPITULATION showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, Quantity and Value of Fishing Material, Kinds and Quantities of Fish, and the Total Number of Men employed, &c., in the Province of New Brunswick, for the Year, 1877.

No.	COUNTIES.	FISHING MATERIAL.						KINDS OF FISH.					
		Vessels.	Boats.	Nets.	Weirs.	No.	Value.	No.	Men.	No.	Value.	No.	Men.
1	Restigouche.....	15	424	12500	88	1160	\$90	15696	9400	50	232500	50	57000
2	Gloucester.....	53	879	11220	53	879	2050	54133	36973	1000	233960	5680	2435
3	Northumberland	5450	309	440	7533	636	51849	35089	647603	113	2350	31060	3500
4	Kent.....	22	253	3500	62	682	1695	38390	23340	675	198200	18000	1227
5	Westmoreland	2	30	100	54	398	154	5575	3195	142	.....	1100	10400
6	Albert.....	7	23	920	60	3200	1460	11	975	35	.....	300	2780
7	Victoria	1	.....	.....	15	120	345	120	12	4664	.....	.....	30000
8	Carlton	1	.....	.....	30	180	30	275	275	.....	3619	.....	.....
9	York	1	.....	.....	274	6800	542	8320	8320	1200	.....	1200	2000
10	Queens and Sunbury.....	1	.....	.....	41	560	41	1850	1055	4	13961	100300	10360
11	Kings.....	1	.....	.....	746	100096	746	100096	70384	32	10750	60000	80693
12	St. John	1	308	112755	1107	59005	53781	82	25500	82	.....	360	517550
13	Charlotte	1	1816	43950	856	523	1107	39905	39905	.....	.....	.....	.....
Total	240	3639	80000	1141	3680	205247	7166	349044	216456	567	38700	356	11740
												4472	65040
												62350	120158
												4472	519725

RECAPITULATION showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—
New Brunswick—Continued.

No.	COUNTIES.	KINDS OF FISH.										FISH PRODUCTS.		VALUE.				
		Alewives, barrels.	Cod, cwt.	Cod Tongues and Sounds, barrels.	Pollack, cwt.	Hake, cwt.	Haddock, cwt.	Haddock, lbs.	Bass, lbs.	TROUT, lbs.	Sメelt, lbs.	Lobsters, cans.	Fish Oil, gallons.	Fish Guano, tons.	Fish used as manure, barrels.			
1	Restigouche.....	1000	5000	5000	26880	19000	10	68000	375	1500	300	62,530	00	300	62,530	00		
2	Gloster.....	43000	1102	5450	52500	226	133559	2330	657400	1112	3813	109320	26090	500	436,264	28		
3	Northumberland	2176	490	440	400	13100	5860	7300	705000	466	2125	1004740	1350	482	215,206	09		
4	Kent.....	1700	42	440	390	140	60	1880	4000	20000	500	300	252000	1450	482	261,204	60	
5	Westmoreland	40	50	10	140	18	1630	550	625	10000	6500	300	150	200	250	117,090	00	
6	Albert.....	75	18	10	140	18	1630	550	625	10000	6500	300	150	200	250	7,646	88	
7	Victoria .....	.....	.....	.....	.....	.....	6	500	30	500	500	500	500	500	500	228	00
8	Carleton .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	969	60
9	York .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	542	85
10	Queens and Sunbury	1314	.....	.....	.....	.....	.....	496	22000	500	500	500	500	500	500	12,393	00
11	Kings.....	150	25	2010	2000	43000	11800	1600	28000	50	8000	5	10000	1000	1000	1000	3,946	65
12	St. John	3000	100	22416	31335	1355412	101000	100000	100000	1300	1300	100000	249454	90595	127,535	50		
13	Charlotte	640	17105	502	17105	121200	4838	228954	56338	1950700	13672	7738	1988974	121335	890	887,679	52	
	Total.....	9135	68209	12941	24926	40590	1468030	121200	4838	228954	56338	1950700	13672	7738	890	5951	2,133,236	97

RECAPITULATION

Of the Yield and Value of the Fisheries of New Brunswick during the Year 1877

Kinds of Fish.	Quantities.	Prices.	Value.
		\$ cts.	\$ cts.
Salmon, Pickled.....	356 barrels, at	15 00	5,340 00
do Fresh, in ice.....	1,348,007 lbs. "	0 15	202,201 05
do Smoked.....	62,350 "	0 15	9,352 50
do in cans.....	111,740 "	0 15	16,761 00
Mackerel	4,472 barrels "	10 00	44,720 00
do Preserved	65,040 cans "	0 15	9,756 00
Herrings	120,158 barrels "	4 00	480,632 00
do Smoked	519,725 boxes "	0 25	129,931 25
Alewives	9,135 barrels "	5 00	45,675 00
Cod.....	68,209 cwt. "	4 25	289,888 25
do Tongues and Sounds	1,294 ^{1/2} barrels "	7 00	9,061 50
Pollack	24,926 cwt. "	3 50	87,241 00
Hake.....	40,590 "	3 50	142,065 00
Haddock.....	14,630 ³⁰ / ₁₀₀ "	3 50	51,416 05
Halibut	121,200 lbs. "	0 06	7,272 00
Shad	4,838 barrels "	8 00	38,704 00
Bass	228,954 lbs. "	0 06	13,737 24
Trout	56,338 "	0 06	3,380 28
Smelt.....	1,950,700 "	0 06	117,042 00
Belts.....	1,1,367 ^{1/2} barrels "	9 00	12,307 50
Oysters.....	7,738 "	3 00	23,214 00
Lobsters, in cans.....	1,988,974 cans "	0 15	298,346 10
Fish Oil.....	121,335 gallons "	0 65	78,867 75
Guano	890 tons "	15 00	13,350 00
do used as manure.....	5,951 barrels "	0 50	2,975 50
Total Value of the Products of the Fisheries in 1877	.....	2,133,236 97	
do	1876	1,953,388 49	
Increase.....	.....	179,848 48	

NO. 13.

REPORTS ON THE FISHERIES OF THE PROVINCE OF PRINCE EDWARD
ISLAND, FOR THE YEAR 1877.KING'S COUNTY.—MARTIN McINNIS, *Overseer.*

I herewith enclose my second report for the year ended 31st December, 1877, containing the fishery statistics of my division, King's County, Prince Edward Island. The fishery season just ended has proved much more productive than that of last year, owing to the large quantity of inshore bait; it continued on the north side of the Island up to the last of June. As the smelt and capelin move to deep water, the codfish follow, making it difficult to pursue the fishery. A very serious injury to the fisheries of this county is, throwing over gurry or offals on the fishing grounds, by American and Nova Scotia fishing vessels. The overseers can control them only to a very small extent. Haddock have been scarce on the north side of the Island, while hake have been plentiful on the south of King's County, owing to the muddy bottom. There has been a large increase in the catch of mackerel, owing to the ice leaving the coast much earlier this season. Herring was rather scarce on account of high winds in the earlier part of the season. It was of an excellent quality to the east of the county, where the ice leaves much earlier than to the westward of the Island. The gaspereaux fishing has always been a valuable resource to the inhabitants of this county; almost all families having boats and nets are accustomed to catch more or less for home use, and the failure of last year is a cause of great regret; the people say it is in consequence of a bridge composed of brush work thrown across the inlet of the lake, causing the wholesale destruction of the gaspereaux. Salmon fishing, since the railroad has been finished, is much better, there being an opportunity to transport it fresh to the different markets of the Island; this will in a great measure, I have no doubt, render the trade more profitable to all parties engaged in salmon fishing. Since the laws against the destructive practice of seining salmon are enforced, the fish come more plentiful in the rivers of the county. The smelt fishing in this county is assuming considerable importance, and will require to be looked after, from the manner they are taken, with bag and scoop nets in the spawning season. I would, therefore, suggest the propriety of stopping such violation of the Fishery Laws. Eel fishing has increased in all the rivers of King's County, owing to an improvement in the mode of setting traps and nets, and to better compliance with the Fishery Laws. Oyster beds upon the coast and in our rivers and estuaries are not materially increasing, owing to the large quantity of mud washed upon the oyster beds spring and fall, which injures the oysters. Lobster fishing is carried on by five establishments for canning in King's County. I have closely watched this fishery for the past two years to form an idea of the spawning season; it is difficult, as there is no particular time for the spawning of lobsters in this Island, owing to the different localities they resort to, but varies according to the temperature of the water. Last season the female lobsters carried eggs to the last of May and up to the end of September. My opinion is that the lobsters spawn twice a year on the shores of this Island, in the months of May and August. The yield of lobster fishing has considerably increased this season. Trout fishing has greatly increased during the past year, owing to efforts made by the wardens and myself to prevent violation of the law.

Warden John McGuire prosecuted four of parties before two Justices of the Peace; the case was tried, and he failed to prove illegal fishing against the parties at Morelle River, but it served the purpose of deterring others.

Besides a considerable increase over last year in the fishing for trade, about one-fourth more is used for home consumption. The Fishery Laws have been well complied with in King's County.

QUEEN'S COUNTY.—ISAAC THOMPSON, *Overseer.*

According to your instructions, I have collected and now forward the statistics of Queen's County, Prince Edward Island. You will observe by the accompanying return that the mackerel fishing of the past season has been far more productive than in the

previous year, [the number of barrels taken in 1877 being 15,082, against 7,767 in 1876. The herring and cod fisheries have proved almost a failure, in consequence of the ice remaining on the shores until the first of June; the herring were thus prevented from entering the bays or approaching the shores, and, as the cod-fish follow the herring in spring, both were too far from land to admit of the prosecution of the fishery in open boats.

Lobsters.

A canning establishment went into operation at Point Prim on the 15th of September. It is the only one of the kind at present in this county. But lobsters are taken in considerable numbers and sold fresh in Charlottetown market. I estimate the value of those thus disposed of at about \$240. Amongst these fresh lobsters, I observed spawn-fish occasionally throughout the summer. With a view to ascertaining the condition of the fish, I went to Souris a few days before the close time commenced. I saw large quantities of lobsters at the canning establishment here; very few, however, had spawn upon them. But on the reopening of the fishery at Rustico Bay, nearly all the lobsters were spawn fish. This induced me to pay a second visit to Souris. There I found nearly all the fish hard-shelled and clear of spawn; while those taken at Point Prim from the 15th September till the 1st of November were nearly all soft-shelled. I infer from these facts that the lobster enters the bays and calm waters to spawn, and as it does not appear that spawning fish are generally taken on the open coast, it would seem necessary to their preservation that the close time within the harbours should be prolonged.

Oysters.

I found it very difficult to procure accurate returns of the extent and value of the oyster fisheries. The principal beds being in the vicinity of Charlottetown, many persons occasionally engage in the business. They sell the oysters they take either by the bushel unshelled, or shelled by the quart, keeping no account of the proceeds. I have given the value of this fishery as nearly as I could ascertain it, though probably somewhat under the actual amount.

Some infringements of the law occurred, but my endeavours to prevent them were unsuccessful. The station of the nearest warden is nine miles from the oyster beds, and, as the fishermen use a boat and station a watch on shore, a stranger has very little chance of detecting them. Probably the illegal fishing might be put a stop to by appointing a warden in Charlottetown where the oysters are sold.

Trout.

In addition to the recommendations contained in my report of last year, I would suggest that the eighth clause of 31 Vic., chap. 60, be applied to this Province, as I consider it would be a great benefit to the trout fishery. I received information of illegal fishing being carried on at the mouths of the streams emptying into the ponds at Blooming Point. I went personally to the places indicated, but without success; subsequently, I employed a man to watch there, who succeeded in seizing a net set across the stream, but found no owner for it; the illegal fishing, however, was stopped.

Salmon.

There has been a good run of this fish; they were up the Winter and West Rivers in large numbers. There has been no infringement of the law brought to my notice with regard to salmon.

Alewives.

"The run" which was opened in the early part of the season between Bedford Basin and the ponds at Blooming Point, allowed large numbers of these fish to reach the spawning grounds. On the 12th and 13th of June, I examined the ponds at New London. There are two frequented by alewives, one near the residence of the Hon. Senator Montgomery, and the other near Mr. Campbell's mills; the former is small with a small run from it which requires to be scoured, after which no fishing should

be allowed for a year or two until the pond is restocked. The other pond is large, with a good stream from it; large numbers of fish frequent it, but if not protected they will soon be destroyed. I would recommend that a person be appointed at or near Campbell's mills to look after those ponds. The alewives are all used for bait and home consumption; but I was unable to ascertain the quantities taken with anything approaching precision.

All the mackerel taken are shipped to the United States, except those that are sold at Charlottetown market. These I estimate as equal to from 200 to 300 barrels.

If desired, I will procure at the Custom House, after the close of navigation, a return of all the mackerel exported to the United States from all the ports, and forward to the Department. I am aware that parties in Georgetown bought mackerel in Tracadie and Covehead, which may have been cleared from Georgetown, and might thus appear twice on the returns.

One American vessel lay in Tracadie harbour all summer, and her crew fished with boats outside; their fare was 150 barrels of mackerel. An American subject also lived on shore, and fishing with one boat took 30 barrels.

On the whole, it appears from the returns, that notwithstanding the partial failure of the cod and herring fishery, the total value of the fisheries of this county for the year 1877, exceeds that of the previous year, by the sum of \$87,150.05; the respective values for these two years being for 1877, \$206,275.10; 1876, \$119,225.05.

PRINCE COUNTY.—JOHN CLARK, Overseer.

Tryon, Lot 28.

From this place to Bedeque there are a few boats kept by the farmers who catch herring and mackerel for home consumption, but none for sale. Mackerel come into the Straits very plentifully, but the farmers are too much engaged on their farms to attend to fishing; they only catch what they want for home use.

Summerside, Lot 17.

This is a smart little business town, where ship building is carried on very extensively, but not much fishing done; although there are large quantities of fish shipped from this port, yet they are not caught here, but come in by rail and otherwise.

Some two or three miles from Summerside is Bedeque Bay, once celebrated for the best oysters in the Lower Provinces, but over-fishing has completely extirpated them.

DUNK RIVER, LOT 25.

This river empties into Bedeque Bay, and passes out Bedeque or Summerside Harbour. It is said to be the best on the Island for catching trout, and salmon come up abundantly in the month of September and remain until late in November, and are very hard to protect from the poachers who come up there in the dark hours of the night disguised so and armed to the teeth that they are hard either to catch or identify; they go there blackened and so disfigured that it is difficult to swear to them. The wardens caught two of them, took their boats and twenty-five salmon, but the men made their escape.

EGMONT BAY.

This is the next fishing ground. There are about thirty boats and sixty men engaged in the fishing business. The principal shippers of fish are the Hon. Joseph Arsenault and David Rogers, Esq. The fisheries are not very vigorously prosecuted here, although the mackerel are very plenty outside in the months of July and August; but the harbour not being good retards the fishing very much. A little dredging would be a great benefit to the fishermen here. From Egmont Bay to the West point there are several rivers and creeks where trout and salmon frequent, such as Enmore and Pierre Jacques. From Miminingash to North Cape there are Black Pond, Skinner's Pond and Neal Pond, all good fishing stands. At Skinner's pond there are three large stages kept by F. Larkins, Joseph McIntyre and Gilbert Poirier; also eight small stages owned by different parties. At Neal Pond there are

five large stages owned by James Morrisey, Thomas Caio, William Larkin, Angus Gaudet and Alexander Horten, and ten small stages belonging to different parties up to the North Cape. From the North Cape to the Run there are several fishing stages owned by James Davidson, P. Morrisey and others.

TIGNISH BREAKWATER.

This is a very important place. The breakwater built by the Dominion Government answers an excellent purpose, it makes a splendid shelter for boats, and schooners of forty tons can come in and find good shelter from the north-east storms which have proved so destructive to life and property on this shore in years not long gone by. At this breakwater the Hon. J. C. Pope does a large fishing business, and a few chains further south is the establishment of Hall & Myric. This firm does the largest fishing business on the Island, beside a very large mercantile business.

WEST POINT, LOT 8.

There is no fishing done here of any importance, the farmers catch what they want to use. But from this to Campbellton, Lot 4, there are several small fishing stages and a great many barrels of both mackerel and herring taken, and some cod and hake ; these are all sold to the shippers and accounted for otherwise.

CAMPBELLTON, LOT 4.

There is quite a fishing business done here, principally by John A. Matheson Esq., who also carries on a large fishing business at Big Miminigash.

LITTLE KIMINIGASH, LOT 3.

The Hon. Richard Reid does a large fishing business here ; has shipped from this place one thousand barrels of mackerel this season.

BIG KIMINIGASH, LOT 3.

This is one of the most important fishing places in all this county. There were nearly 5,000 barrels of mackerel, besides cod, hake, bass, and lobsters taken here this season. The harbour needs to be improved very much. The can and spar buoy is a great benefit to the fishermen. A number of small schooners and boats from New Brunswick find shelter here. A few thousand dollars laid out in building a breakwater and lighthouse would make this the best fishing place in the county.

From Hall and Myric's establishment to Cascumpec Harbour there are several small fishing stages with about 40 boats and 120 men employed in the fishing business. They catch mackerel, herring, cod, and salmon on this shore. The herring and salmon are principally used at home.

CASCUMPEC HARBOUR.

This is the only harbour of refuge on this side of the Island where vessels can make in a storm, and it is not as good as formerly, owing to two other runs breaking out through the sandhills ; these runs or harbours let off a great portion of the water in Cascumpec or Holland's Bay, leaving less to pass out of the main harbour, consequently there is less current to carry out the sand, which, during heavy storms lodges on the bar, causing the water to be much less on the bar than before those runs broke out. If these runs could be stopped it would make eighteen feet of water on the bar, where there are only twelve now ; eighteen feet was the depth on the bar before these runs broke out. This is a very important harbour, not only as one of refuge, but there are a great many large ships built up those rivers every year. The Hon. J. C. Pope does a large business at Cascumpec Point ; he has launched three this season from his yard at the point.

The Hon. John Yeo builds ships every year up Mill River, Lot 5, and on Lot 10 river. There are several vessels loading produce at the wharves at Cascumpec just now ; the harbour is as free from ice as in midsummer.

CASCUMPEC BAY.

This is a large bay extending from Cascumpec Point, on the north, to Lot 11, on the south, about four miles across, each way, with three large rivers emptying into it, Lot 5, Lot 10, and Lot 11; these rivers are very deep, averaging five fathoms of water, and from five to ten chains in width. There are oysters in abundance up all these rivers; most extensive oyster beds; and at the head of the tide on all these rivers trout are taken in abundance, and salmon come up in spawning time.

THE NARROWS OR LENNOX PASSAGE.

This is a narrow streak of water running between the land and the sandhills from Cascumpec Bay to Richmond Bay. Down these narrows are very extensive oyster beds between Squirrel Creek and Lennox Island; the oyster beds are owned by Messrs. Pope and Hunt, where they ship large quantities every year. The next place we come to is Bedford River, which is famed for good oysters.

Up the river is the residence of the Hon. William Richards, a gentleman doing a large mercantile and shipping business. The Honourables James and John Yeo build ships here and do a large business otherwise.

PORT HILL, LOT 13.

This is where the Honourables James and John Yeo reside; they are extensive shipbuilders and farmers, but never engage in fishing. This place is west of Richmond Bay.

RICHMOND BAY.

This Bay reaches from Port Hill on the west to Prince Town on the east, and from the shore of Lot 17 to Malpec Harbour, and contains several small islands, which are named Hog, Courtin and Fish Islands. Oyster fishing is most vigorously prosecuted in this bay; there were fourteen thousand barrels of oysters fished here this season and shipped to the Dominion of Canada. Herring are also caught here in abundance during the month of May.

PRINCE TOWN, LOT 18.

The fisheries are not vigorously prosecuted here, although it is convenient to the outside shore. The inhabitants are too good farmers to attend to fishing. There are only two or three parties who engage in fishing, and they do a very good business in mackerel, cod and herring. There is one lobster factory, owned by Henry McNutt, Esq., who puts up large quantities of lobsters.

The fishing this year has been a pretty fair average catch, especially on the western shore, from Campbellton to the North Cape. Mackerel fishing was much better on the eastern side—the fish were never known to be more plentiful than this season, but would not take bait in the hot weather. The fisheries have been worth about \$47,000 more this year than last in this district.

In reference to the protection of the fisheries, I have no trouble in this district, with the exception of Dunk River and on the south side of Richmond Bay. At Dunk River it is impossible to keep those old poachers off; the wardens say they cannot protect the river unless the law is more stringent. They should be sent to the penitentiary.

At Richmond Bay I have some trouble to stop them from taking oysters in the close season, there being no wardens on that side of the Bay.

In regard to fishways, there are none in this district. I brought it to the notice of the Department last year, but have had no orders to have any built. There are two or three mills that might require them, but as there were none under the local Act, and as I have not been instructed to build any, I have not insisted on having them.

No.

RETURN showing the Number, Tonnage and Value of Vessels and Boats
and Quantities of Fish, and the Total Number of Men employed,

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.				Mackerel, barrels.	
	Vessels.			Boats.			Nets.		Weirs.			
	No.	Tonnage.	\$	No.	Men.	\$	Fathoms.	\$	Value.	No.	\$	
<i>Kings.</i>												
Savage Harbour	14	280	42	100	80	.....	.....	.....	132	
St. Peter's Lake	1	25	4	200	160	.....	2	1200	.....	.....
Back Settlement.....	1	12	2	30	14	.....	.....	640	.....	.....
St. Peter's Harbour	2	60	1080	12	4	100	8	.....	.....	.....	300
St. Peter's	7	140	21	30	15	.....	.....	.....	.....	302	
Greenwich to Cable Head	4	64	12	257	250	.....	8	2600	.....	245	
Cable Head to Goose River.....	14	350	28	80	40	.....	.....	.....	.....	220	
Goose River to Big Cape	18	360	36	140	70	.....	.....	.....	.....	508	
Big Cape to New Fradge	16	240	38	102	51	.....	10	.....	.....	291	
New Fradge to Bear River.....	12	144	24	70	35	.....	.....	.....	.....	101	
Bear River to Black Bush.....	38	740	76	129	65	.....	.....	.....	.....	371	
Black Bush to Long Point.....	42	500	84	111	56	.....	.....	.....	.....	225	
Long Point to Campbell Cove.....	19	190	38	298	149	.....	.....	.....	.....	333	
Campbell Cove to North Lake.....	18	360	32	289	144	.....	.....	.....	.....	381	
North Lake to East Point.....	8	96	16	72	36	.....	.....	.....	.....	63	
East Point to Red Point.....	67	1500	160	99	49	.....	.....	.....	.....	200	
Red Point to Colville Bay	137	5480	300	420	260	.....	.....	.....	.....	2592	
Colville Bay to Rollo Bay.....	22	440	60	97	56	.....	.....	.....	.....	87	
Rollo Bay to Howe Bay	19	190	47	100	50	.....	.....	.....	.....	199	
Howe Bay to Armandale	30	600	60	178	89	.....	.....	.....	.....	190	
Armandale to Boughton Island.....	12	144	24	100	50	.....	.....	.....	.....	309	
Boughton Island to Georgetown.....	8	80	18	142	71	.....	.....	.....	.....	198	
Georgetown to Indian Point.....	11	132	28	80	40	.....	.....	.....	.....	102	
Indian Point to Albion Bay.....	4	60	12	50	25	.....	.....	.....	.....	40	
Albion Bay to Sturgeon Bay.....	5	50	10	20	10	.....	.....	.....	.....	48	
Sturgeon Bay to South Point.....	22	264	44	132	66	.....	.....	.....	.....	259	
South Point to Sable Point.....	24	204	48	107	53	.....	.....	.....	.....	372	
Sable Point to Cape Bear.....	6	300	4800	25	28	336	56	198	96	.....	109
Cape Bear to Gurasay Cove.....	16	320	32	60	30	.....	.....	.....	.....	.....
Gurnsey Cove to White Sands	5	60	10	30	15	.....	.....	.....	.....	.....
White Sands to County Line.....	32	640	64	174	87	.....	.....	.....	.....	.....
<i>Fish used for local consumption.</i>	
Total	8	360	5880	37	658	14101	1434	3895	2212	20	4440	8177

14.

engaged in the Fisheries; Quantity and Value of Fishing Material; Kinds &c., in the Province of Prince Edward Island, for the Year 1877.

KINDS OF FISH.										FISH PRODUCTS.	VALUE.							
Mackerel, in cans.	Herrings, barrels.	Herrings, Smoked, in boxes.	Cod, cwt.	Cod Tongues and Sounds, barrels.	Follack, cwt.	Haddock, lbs.	Halibut, lbs.	Shad, barrels.	Bass, lbs.	Trout, lbs.	Smelt, lbs.	Eels, barrels.	Oysters, barrels.	Lobsters, cans.	Fish Oil, gals.	Fish Guano, tons.	Fish used as manure, barrels.	\$ cts.
40	50	112	2	2240	.....	.....	300	1000	10	.....	80	.....	.....	.....	2,505	40	
41	20	.....	.....	.....	.....	.....	100	800	3	.....	.....	.....	.....	.....	525	00	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	96	00	
.....	100	5	.....	100	.....	.....	400	300	4	20	.....	100	40	.....	3,507	00	
30	420	2	.....	2240	.....	.....	.....	.....	.....	.....	.....	100	100	.....	5,276	40	
50	196	3	.....	2800	50	.....	.....	.....	.....	.....	.....	67	.....	.....	4,228	55	
10	100	2	.....	2240	20	.....	.....	.....	.....	.....	80	30	.....	.....	2,846	10	
52	200	4	.....	3584	30	.....	.....	.....	.....	.....	80	30	.....	.....	6,434	84	
60	158	3	.....	8960	.....	.....	.....	.....	.....	.....	89	.....	.....	.....	4,587	95	
40	107	2	.....	3360	.....	.....	.....	.....	.....	.....	62	.....	.....	.....	1,880	65	
11	109	1	.....	2800	.....	.....	.....	.....	.....	.....	93	.....	.....	.....	4,452	70	
84	297	4	.....	8064	.....	.....	.....	.....	.....	.....	106	.....	.....	.....	4,428	99	
40	201	5	.....	4704	.....	.....	.....	.....	.....	.....	100	.....	.....	.....	4,726	49	
281	575	179	2	.....	5712	.....	.....	.....	.....	.....	73	.....	.....	.....	8,111	42	
50	194	2	.....	1232	.....	.....	.....	.....	.....	.....	59	.....	.....	.....	1,780	77	
61	219	61	.....	22400	.....	.....	.....	.....	.....	.....	300	.....	.....	.....	4,755	75	
210	1200	20	.....	24552	.....	.....	.....	.....	.....	3800	201	.....	.....	.....	34,173	77	
30	107	6	.....	22736	.....	.....	.....	180000	.....	180000	89	.....	.....	.....	29,908	76	
80	195	3	204	4704	.....	.....	.....	.....	.....	.....	71	.....	.....	.....	4,202	14	
60	201	4	307	4480	.....	.....	.....	.....	.....	.....	100	.....	.....	.....	4,430	55	
.....	179	4	105	3240	.....	.....	.....	.....	.....	.....	90	.....	.....	.....	4,439	15	
37	87	5	105	.....	.....	.....	197000	.....	197000	110	.....	.....	.....	.....	32,521	75	
.....	90	1	100	.....	.....	.....	.....	.....	.....	24	.....	.....	.....	.....	1,775	10	
10	70	.....	96	.....	.....	.....	.....	.....	.....	20	.....	.....	.....	.....	1,086	50	
5	30	1	45	.....	.....	.....	.....	.....	.....	16	.....	.....	.....	.....	802	40	
24	201	10	500	.....	.....	.....	.....	.....	.....	120	.....	.....	.....	.....	5,438	25	
82	294	14	340	.....	.....	.....	.....	.....	.....	145	.....	.....	.....	.....	6,679	75	
136	408	32	606	.....	.....	.....	130000	.....	130000	274	.....	.....	.....	.....	25,706	10	
56	287	8	308	.....	.....	.....	.....	.....	.....	196	.....	.....	.....	.....	2,705	15	
50	80	1	100	.....	.....	.....	32000	.....	32000	22	.....	.....	.....	.....	5,711	30	
56	397	20	656	.....	.....	.....	.....	.....	.....	267	.....	.....	.....	.....	4,520	80	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50,000	00	.....	.....	50,000	00	
1686	645	6418	172	3562	129048	200	800	2200	17	20	542980	3024	.....	.....	\$274,245	48	

RETURN showing the Number, Tonnage, and Value of Vessels and Boats

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.				
	Vessels.			Boats.			Nets.		Weirs.		
	No.	Tonnage.	Men.	No.	#	Value.	Men.	Fathoms.	No.	#	Value.
<i>Queens.</i>											
Cavendish.....				27	965	51	70	35			
New London	1	43	1700	11	61	5000	177	.....		
Cove Head.....				11	630	40	120	25			
Tracadie				17	1100	80	300	72			2000
French Village.....				25	750	75	300	72			
Rustico				82	15300	388	820	175			
Vernon River.....				20	500	58	.....	.....	
Victoria.....				7	140	21	100	50			
De Sable				11	220	33	165	75			
Argyle Shore.....				4	75	14	80	34			
Canoe Cove				30	700	100	900	415			
Nine Mile Creek.....				7	105	28	210	94			
St. Peter's Island.....				9	182	27	180	90			
Pinette	2	46	450	12	10	120	25	600	150		
Flat River.....				4	80	8	140	60			
Point Prim.....				7	140	21	840	200			
Belfast				4	40	12	80	200			
Belle Creek.....				18	450	54	1080	378			
Wood Islands				22	528	66	440	220			
Charlottetown.....	1	60	2000	14	.....	.....	.....	.....
Total.....	4	149	4150	37	376	27025	1278	6425	2345		2000

NOTE.—Fish used for local consumption is included.

engaged in the Fisheries, &c.—Prince Edward Island.—*Continued.*

KINDS OF FISH.										FISH PRODUCTS.		VALUE. \$ cts.									
Mackerel, barrels.	Mackerel, in cans.	Herrings, barrels.	Herrings, Smoked, in boxes.	Alewives, barrels.	Cod, cwt.	Cod Tongues and Sounds, barrels.	Pollack, cwt.	Hake, cwt.	Haddock, lbs.	Halibut, lbs.	Shad, barrels.	Bass, lbs.	Trout, lbs.	Smelt, lbs.	Eels, barrels.	Oysters, barrels.	Lobsters, cans.	Fish Oil, gallons.	Fish Guano, tons.	Fish used as manure, barrels.	
934	55				70													56			9,893 90
2973					400													300			31,625 00
675	43				45													45			7,142 50
740	200			100	250													170			10,023 00
700	100				100													60			7,864 00
8588	246				820													662			90,779 30
24	16				20													16			699 40
18					20																265 00
28	48				16																540 00
17	42				12																389 00
75	300				150																2,587 50
26	58				30																619 50
34	60				50																792 50
	24				44																283 00
	24				20																181 00
	42				70																1,515 50
	8				12																83 00
	144				216			25													1,581 50
	220			132	2	264															2,368 50
	250																				6,850 00
15082	1630		100	2477	½	289										1550	7000	1309			176,083 10

RETURN showing the Number, Tonnage and Value of Vessels and Boats

COUNTIES.	VESSELS AND BOATS EMPLOYED IN FISHING.						FISHING MATERIAL.							
	Vessels.			Boats.			Nets.			Weirs.				
	No.	Tonnage.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.	Salmon, barrels.	Salmon, Fresh, in ice, lbs.	Salmon, Smoked, lbs.	Salmon, in cans, lbs.	Mackerel, barrels.
<i>Prince.</i>														
Tryon, lot 28.....	6	300	12										40	
Dunk River, lot 25.....													..	
Summerside, lot 17.....	10	350	20	300	100								50	
Egmont Bay	30	1800	60	1200	300								1200	
Campbellton, lot 4.....	25	1200	60	1000	250								750	
Little Mihinegash.....	15	900	45	1000	250								1000	
Big Mihinegash	41	2400	200	650	162								4218	
Tignish, lots 1 and 2	202	12120	708	3540	885								7855	
Kildare Shore.....	39	2000	117	700	175				10				500	
Alberton	46	3800	200	2000	900				3000				1000	
Lennix Passage or Narrows	12	700	36	1000	250								240	
Richmond Bay and Princetown.....	14	700	41	1500	375								350	
<i>Fish used for local consumption by Farmers around the shores.</i>														
Total.....	440	26270	1499	12890	3647				10	3000			17203	

RECAPITULATION of the Number, Tonnage and Value of Vessels and Boats
and Quantities of Fish, and the Total Number of Men employed,

COUNTIES.													
Kings	8360	5880	37	658	14101	1434	3895	2212		20	4440		8177
Queens	4149	4150	37	376	27025	1278	7425	2345		2000			15082
Prince.....				440	26270	1499	12890	3647		10	3000		17203
Total	12509	10030	74	1474	67396	4211	23210	8204		30	9440		40462

engaged in the Fisheries, &c.—Prince Edward Island—*Concluded.*

engaged in the Fisheries; Quantity and Value of Fishing Material; Kinds &c, in the Province of Prince Edward Island, for the year 1877.

... 1686	.....	645	6418	172	...	3562	129048	200	...	.....	800	2200	17	20	542980	3024	...	.....	274,245	48
... 1630	.....	100	2477	4	...	289	.....	...	...	.....	...	...	...	1550	7000	1309	...	.....	176,083	10
... 6177	.....	4695	61	3578	...	.....	2200	32900	...	19280	113920	3741	...	...	...	...	...	312,707	40	
... 9493	.....	745	13590	2383	...	7429	129048	200	...	2200	33700	2200	17	20850	663900	8074	...	.....	763,035	98

RECAPITULATION

Of the Yield of the Fisheries of Prince Edward Island, during the
Year 1877.

Kinds of Fish.	Quantities.			Prices.	Value.
Codfish	13,590	cwt.	at	4 25	57,757 50
Herrings	9,493	brls.	"	4 00	37,972 00
Mackerel.....	40,462	" "	.....	10 00	404,620 00
Haddock	129,048	lbs. "	.....	0 06	7,742 88
Hake.....	7,429	cwt.	"	3 50	26,001 50
Salmon, Pickled.....	30	brls.	"	15 00	450 00
do Fresh, in ice.....	9,440	lbs.	"	C 15	1,416 00
Alewives	745	brls.	"	3 50	2,607 50
Trout	33,700	lbs.	"	0 06	2,022 00
Bass	2,200	" "	.....	0 06	132 00
Halibut	200	" "	.....	0 06	12 00
Smelts.....	2,200	" "	.....	0 06	132 00
Eels.....	17	brls.	"	9 00	153 00
Cod Tongues and Sounds.....	233 $\frac{1}{2}$	" "	.....	7 00	1,634 50
Oysters.....	20,850	" "	.....	3 00	62,550 00
Lobsters, preseaved in cans.....	663,900	cans	"	0 15	99,585 00
Fish Oil.....	8,074	galls.	"	0 65	5,248 10
Fish used for local consumption in the Counties of Prince and Kings					53,000 00
Total Value of the Products of the Fisheries in 1877					763,035 98
do do do 1876					494,967 08
Increase.....					268,068 90

No.

RETURN of the Number and Value of Vessels, Boats, Nets, &c., together with

STATION.	VESSELS AND BOATS EMPLOYED FISHING.						NETS, THEIR NUMBER, SIZE,					
	Vessels.			Boats.			Gill Nets.			Seines.		Pound Nets.
	No.	Tonnage.	Men.	No.	Men.	No.	Rods.	Value.	No.	Rods.	Value.	No.
<i>Lake Superior Division.</i>												
*Victoria Island												
*Fort William (Indians)												
Welcome Island		2	135	4	18	180	205					
McVicar's Creek		1	75	2	15	150	160					
Bear Point		1	60	2	10	100	85					
North side Thunder Bay		2	55	4	11	70	55					
*South side do												
*Hare Island												
Thunder Cape		1	50	2	18	130	110					
*Edward's Island												
Roche Debout and Grand Sagash	1	75	2000	3	10	750	21	43	950	810		
Fluor Island					1	20	2	2	40	25		
St. Ignace Island					2	200	4	3	500	475		
Simpson's Island					5	188	10	42	400	300		
Battle and Salter Islands					3	312	7	40	350	250		
Wilson Island					1	35	2	8	100	60		
Jackfish Bay					1	75	4	6	100	180		
Michipicoten Island					1	175	2	12	820	270		
Lizard Island					2	300	4	32	3000	1120		
North Mamainse					4	800	8	40	4727	1560		
South do					2	250	5	22	2454	810		
Goulais Bay N					4	160	8	16	60	70		
†Sault Ste. Marie's Rapids					5	125	10					
Duck Islands	1	20	500	2	12	900	40	36	3700	1300		
†Bigby Island	1	8	2000	3	5	2000	10	55	5454	1800		
Grand Batture and Mipissauga River					2	300	4	32	3000	1120		
Total.....	3	103	4500	8	67	6965	155	461	26285	10765		

* Unoccupied.

† Indians.

‡ Steamer.

NOTE.—24 Angling Permits were issued to fish in Nipigon River.

15.

the Yield and Value of Fish in the Province of Ontario, for the Year 1877.

RETURN of the Number and Value] of

STATION.	VESSELS AND BOATS EMPLOYED FISHING.								NETS, THEIR NUMBER, SIZE, AND VALUE.							
	Vessels.				Boats.				Gill Nets.				Seines.		Pound Nets.	
	No.	Tonnage.	No.	Men.	No.	Men.	No.	Rods.	No.	Value.	No.	Men.	No.	Men.	No.	Value.
<i>Manitoulin Island and Lake Huron Division.</i>																
† Bayfield Sound, Lake Wolsey & West Bay.....	25	1250	50	200	4000	1000										
Gore Bay.....	1	100	2	10	400	200										
L. Kagawong	5	150	10	20	200	60										
† Manitou Lake.....																
Horse Island and East Manitoulin	2	15	1000	6	50	3000	100	600	12000	3000						
† Michael's Bay.....					4	400	8	40	800	200						
Providence Bay.....					2	200	4	20	400	100						
Beaman's Island.....					1	300	3	100	3000	1100						
Burke Islands.....					1	200	3	80	1760	700						
Whitefish Island					1	35	14	.....			1	50	600			
Southampton.....					8	2100	24	714	21640	7200						
§ Sable Beach.....					13	550	200	40	800	200	6	240	900			
Port Elgin.....					2	525	6	144	3300	1440						
Kincardine.....					6	1645	18	568	17040	5950						
Goderich.....					13	2465	39	955	20936	8075						
Bayfield.....					6	1075	18	432	9496	3900						
Lake View							80	150	2500	800						
Bosamquet.....					10	360	60	.....			10	700	2100			
Lake Shore					14	355	32	.....			9	510	1275	*12 *4900	*149	
Point Edward.....					3	40	10	.....			4	22	300	.....	
Sarnia Bay.....					2	25	5	.....			1	18	100	.....	
Indian Reserve.....					3	46	12	.....			3	43	170	.....	
Moore					4	58	17	.....			4	52	260	.....	
Total	2	15	1000	6	174	14879	715	4073	98272	33925	38	1635	5705	*12 *4900	*149	

* Trout lines.

† Indians.

‡ Unoccupied.

§ Saugeen Indians.

Vessels, Boats, Nets, &c.----Ontario—Continued.

RETURN of the Number and Value of Vessels,

STATION.	VESSELS AND BOATS EMPLOYED FISHING.						NETS, THEIR NUMBER, SIZE, AND VALUE.					
	Vessels.			Boats.			Gill Nets.			Seines.		
	No.	Tonnage.	Men.	No.	Men.	Men.	No.	Rods.	No.	Rods.	No.	Value.
<i>Georgian Bay Division.</i>												
Thessalon River												
Fraser Bay												
Killarney Station				8	590	16	59	4868	1476			
Bustard's Islands				6	900	12	96	11640	3360			
Mississagua River.....												
Byng Inlet				6	720	14	82	5910	1980			
Mackay's Island	1	30 400	2	13	635	36	178	4000	1000			
Mink Islands.....	*2	25 3000	6	11	1100	23	130	13000	4550			
Snake Island				4	400	8	48	4800	1680			
Sandy Island				5	425	10	52	5200	1820			
From Byng Inlet to Sandy Island (lo- cal consumption)												
Midland Station and Penetanguishene— from Point Cock- burn to Moose Deer Point				56	939	155	508	5579	2219			
Collingwood and Nottawasaga Is- land	*2	30 4000	6	17	2500	34	265	24090	9235			
Thornbury				3	375	6	42	3820	1470			
Meaford	*1	10 700	3	6	850	12	100	9090	3500			
Point Rich				4	600	8	64	5820	2240			
Owen Sound				5	370	10	11	4290	795			
Colpoys Bay				2	105	3	4	735	235			
Vail's Point				2	105	4	5	980	225			
Cape Croker (In- dians)												
Lion's Head				2	130	4	5	210	165			
Cape Hurd				1	40	1	1	80	55			
Total.....	6	95 8100	17	151	10844	356	1650	104112	36055			

* Tugs.

Boats, Nets, &c.—Ontario—Continued.

RETURN of the Number and Value of Vessels

STATION.	VESSELS AND BOATS EMPLOYED FISHING.								NETS, THEIR NUMBER, SIZE,							
	Vessels.				Boats.				Gill Nets.				Seines.			
	No.	Tonnage.	No.	Men.	No.	Value.	No.	Men.	No.	Rods.	No.	Value.	No.	Rods.	No.	Rods.
<i>Thames River and Lake St. Clair Division.</i>																
Cashmere and Bothwell.....			8	80	47						4	380				
Mitchell's Bay.....			4	36	12						1	158	380			
Little Lake.....			1	10	3						1	54	130			
Sydenham River.....			1	10	4						1	15	36			
Thames River and Lake St. Clair.....			26	249	78						26	334	1320			
Total.....			40	385	144						32	561	1866			
<i>Detroit River Division.</i>																
Detroit River.....			8	192	53						12	245	2350			
Turkey Island, D.R.....			2	50	14						2	44	400			
Grass Island do.....																
Blanc Island do.....			4	100	14						4	75	700			
Fighting Island do.....			14	300	60						15	300	2000			
each Island do.....			7	210	47						12	350	1600			
Total.....			35	852	188						145	1014	7050			
<i>Lake Erie Division.</i>																
Point Pelee.....			23	660	41									15	1114	2632
Point Pelee Island.....	1	15	500	3	90	6	6	450	250					1	70	350
Rondeau.....			8	268	19									8	800	3160
Port Talbot.....			1	20	2									1	75	400
Port Stanley.....			5	154	11						3	110	110	2	168	950
Port Bruce.....			7	65	16						4	165	255	1	80	400
Port Burwell.....			2	10	6						2	45	125			
Long Point, Inner Bay.....			1	5	4						1	20	40			
Turkey Point do.....			1	5	2						1	20	40			
Turkey Point, Outer Bay.....			4	50	16						4	260	510			
Port Ryerse.....	2	13	180	8										3	280	2000
Port Dover.....	1	7	100	5	2	10	4	1	80	50	1	20	40	4	250	2000
Nanticoke.....	1	7	100	4	1	7	2	1	30	30				2	170	1500
Pencock Point.....			1	8	2	1	50	45								
Selkirk.....			3	25	6	3	350	200	1	25	80					
Rainham Centre.....			3	15	4	2	230	150	1	20	20					
Horse Shoe Harbour.....	1	10	250	4										1	100	350
Grand River, Sulphur Creek, Dunnville and Haldimand.....			9	165	25	1	20	12	9	98	294					
Port Maitland.....			2	40	3	1	38	19	1	15	60					
Mohawk Bay.....	1	10	250	4										3	250	750
Moulton Bay, Low Banks.....			1	20	2						2	36	108			
Old Fort Erie, L.E. (hooks & lines).....			11	330	11											
Grand River Division (angling).....																
Total.....	7	62	1380	28	88	1947	182	16	1248	756	30	834	1682	41	3357	14492

*Dip nets.

Boats, Nets, &c.—Ontario—Continued,

VALUE, &c.				KINDS AND QUANTITIES OF FISH.												VALUE.		TOTAL.	
Hoop Nets.	No.	Scoop Nets.	No.																
	No.		No.																
	No.		No.																
	No.		No.																
</																			

RETURN of the Number and Value of Vessels,

STATION.	VESSELS AND BOATS EMPLOYED FISHING.						NETS, THEIR NUMBER, SIZE, AND VALUE.					
	Vessels.			Boats.			Gill Nets.			Seines.		
	No.	Tonnage.	Men.	No.	Men.	No.	Rods.	No.	Men.	No.	Rods.	No.
<i>Niagara River and Lake Ontario Division.</i>												
Fort Erie, Niagara River.....	1	40	4							2	40	150
Bertie, N. R.....	2	40	6							2	40	150
Willoughby, N. R.....	1	20	3							1	20	75
Queenston, N. R.....	4	45	10							4	360	600
Tannery, N. R.....	1	20	4							1	90	120
Niagara and River.....	8	215	19	7	1350	49				6	250	520
Two Mile Creek, L.O.....	2	100	4	5	700	350				1	75	150
Four Mile Creek, L.O.....	4	26	8	10	1630	600				2	144	400
Ten Mile Creek, L.O.....	1	30	4	1	100	40				1	15	20
Port Dalhousie.....	2	120	2	5	925	370						
Jordan and Twenty Mile Pond.....	3	250	3	4	675	250				1	50	200
Thirty Mile Creek.....	1	10	2	1	110	40						
Griswold.....	2	95	4	9	1430	500						
Wynona.....	1	75	2	7	1200	400						
Burlington Bay and Beach.....	21	1020	46	45	4639	2795				16	1051	2540
Burlington Bay and Dundas Marsh*	50	250	90									
Bronte.....	5	320	7	8	984	516				1	55	220
Port Credit.....	2	50	7							2	100	220
The Humber.....	2	40	2	1	60	25				1	25	100
Toronto Island.....	4	250	8	12	1888	925				4	200	860
Ashbridge's Bay.....	3	60	4	10	905	300						
Leslieville.....	3	150	4	11	1826	680						
Gate's Gulley.....	1	40	3	6	360	200				1	30	80
Port Union.....	1	20	4							1	30	80
The Rouge.....	2	30	4	1	40	20				1	30	80
Frenchman's Bay.....	4	100	7	9	620	290				2	60	200
Whitby.....	3	35	5	3	50	30				2	35	90
Brighton and Pres- qu'ile Bay.....	11	590	22	9	4900	882				2	75	140
Colborne.....	3	200	7	3	1790	324						
Cobourg.....	3	300	6	3	1200	216						
Port Hope.....	2	120	3	1	900	180				1	30	40
Port Granby.....	1	15	2							1	25	30
Total.....	154	4910	306	171	28282	10423				56	2830	7065

* Spearing.

Boats, Nets, &c.—Ontario—Continued.

RETURN of the Number and Value of Vessels,

STATION.	VESSELS AND BOATS EMPLOYED FISHING.						NETS, THEIR NUMBER, SIZE,					
	Vessels.			Boats.			Gill Nets.			Seines.		
	No.	Tonnage.	Value.	No.	Men.	Value.	No.	Rods.	Value.	No.	Men.	Value.
<i>Prince Edward County and Bay of Quinte Divisions.</i>												
From Carrying Place to West Point, Wellington Beach, Consecos and West Lakes, P.E Co.	25	650	95	5	1150	230	19	885	970	5	475	1100
East Lake, P. E. Co.	5	100	24	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salmon Point do	7	150	14	347	6940	1041	.....	.....	.....	.....	.....	.....
Point Peter do	4	55	8	81	1620	243	.....	.....	.....	.....	.....	.....
From Point Peter to Petticoat Point, P. E. Co.	8	207	18	8	2390	480	.....	.....	.....	.....	.....	.....
Petticoat Point and Point Traverse, P. E. Co.	216	600	4	16	473	32	190	4400	880	1	18	40
Timber Island, P. E. Co.	2	50	4	6	200	40	.....	.....	.....	.....	.....	.....
Gull Island do	2	80	4	16	800	160	1	18	30	.....	.....	.....
False Ducks' Island do	3	120	6	24	1200	240	1	20	50	.....	.....	.....
Main do do	6	210	12	24	1200	480	.....	.....	.....	.....	.....	.....
South Bay do	1	10	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Green's Island do	4	100	7	46	800	150	.....	.....	.....	.....	.....	.....
Cape Vesey do	3	50	4	35	700	115	.....	.....	.....	.....	.....	.....
Point Pleasant (Bay and Lake sides) P. E. Co.	6	86	11	46	920	147	.....	.....	.....	.....	.....	.....
Sophisburg, P. E. Co.	3	150	10	.....	.....	.....	1	60	200	.....	.....	.....
Big Bay do	9	450	26	6	580	580	.....	.....	.....	.....	.....	.....
Musquito Bay do	4	200	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ford Creek do	2	100	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ameliaburg do	6	300	30	.....	.....	.....	5	300	1000	.....	.....	.....
Murray, Twelve O'Clock Point, Bay of Quinte	1	50	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sidney, Bay of Quinte	1	50	6	.....	.....	.....	1	60	200	.....	.....	.....
Negro Island do	1	50	6	.....	.....	.....	1	60	200	.....	.....	.....
Zwick Island do	2	50	8	.....	.....	.....	1	60	200	.....	.....	.....
Salmon Island do	1	50	6	.....	.....	.....	1	60	200	.....	.....	.....
Moira River do	1	50	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bluff Point, Long Point and Mud Creek, Bay of Quinte	6	350	24	2	200	200	3	720	600	.....	.....	.....
Point Ann, do	4	200	18	2	200	200	2	120	400	.....	.....	.....
Tyendinaga do	7	350	34	.....	.....	.....	6	360	1200	.....	.....	.....
Total.....	216	600	4	140	4771	426	838	23300	5186	48	3216	6390

Boats, Nets, &c.—Ontario—Continued.

VALUE, &c.			KINDS AND QUANTITIES OF FISH.										VALUE.		TOTAL.		
	Hoop Nets.	Scoop Nets.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	
	Φ	Φ	Φ	Φ	Φ	Φ	Φ	Φ	Φ	Φ	Φ	Φ	Φ	Φ	Φ	Φ	
6	100				27000	258			100	493	4,330					4,330	
					10500					52½	525					525	
					42000	144				354	3,540					3,540	
					5300					26½	265					265	
					5600	2950	28½			86	860					860	
					73000	68				4	437	3,650	696			4,346	
					2000	10				20	200					200	
					20000	8				108	1,080					1,080	
					30000	40				190	1,000	900				1,900	
					36000	120				300	2,800	200				3,000	
6	60					20			50	70	400					400	
						11				11	110					110	
					7000	30				65	650					650	
					12000			60	80	200	1,300					1,300	
3	150		20	2000		120		4½	6	244	390	900					1,290
5	250		31	2000		560		2	5	73	681	327	3,210				3,537
10	500									278	278	1,112				1,112	
7	350									156	156	624				624	
			80	6400		350	2	12	14	50	565	465	2,870				3,335
6	300									38	38	152					152
			15	1000		55		1½	4	5	87	55	475				530
			40	2000		5	3	3½	8	9	125	116	750				866
			60	2800		240	1	2½	10	8	326	182	1,940				2,042
								3½	8	15	31	140				140	
2	100									14	14	56					56
2	100		45	2000		170		5	7	38	289	282	1,400				1,682
			20	2000		160	2	19	11	30	40	283	425	1,400			1,525
			50	6000		275	2	16	25	58	135	591	1,045	2,775			3,220
47	1910		361	293600	2950	737½	1980	10	116	73	248	1093	6131	26,001	16,616		42,617

RETURN of the Number and Value of

STATION.	VESSELS AND BOATS EMPLOYED FISHING.						NETS, THEIR NUMBER,					
	Vessels.			Boats.			Gill Nets.			Seines.		
	No.	Tonnage.	Value.	No.	No.	Men.	No.	Rods.	Value.	No.	Rods.	Value.
<i>Lennox and Addington Counties Division.</i>												
Napancee River.....	1	20	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Capt John's Island.....	1	50	2	10	100	150	.....	.....	.....	.....	.....	.....
Casey's Point.....	2	20	4	9	90	100	.....	.....	.....	.....	.....	.....
Hay Bay.....	6	45	9	7	70	70	.....	.....	.....	.....	.....	.....
Thompson's Point.....	3	105	7	.....	.....	.....	3	200	290	.....	.....	.....
Pleasant Bay.....	1	25	2	.....	.....	.....	1	60	90	.....	.....	.....
Coles Point.....	1	25	2	.....	.....	.....	1	40	50	.....	.....	.....
Conway.....	1	40	2	.....	.....	.....	1	100	125	.....	.....	.....
Total.....	16	330	30	26	260	320	6	400	555	.....	.....	.....
<i>Kingston Division.</i>												
Bath.....	4	325	8	63	630	252	.....	.....	.....	.....	.....	.....
Little Cataraqui River.....	1	40	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rideau Canal.....	3	85	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Openicon Lake.....	2	60	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amherst Island and Upper Gap.....	11	520	22	157	1570	628	.....	.....	.....	.....	.....	.....
Big do.....	2	110	4	36	360	144	.....	.....	.....	.....	.....	.....
Pigeon do.....	3	175	6	50	500	200	.....	.....	.....	.....	.....	.....
Simcoe do.....	1	80	2	20	200	80	.....	.....	.....	.....	.....	.....
Wolfe do.....	4	210	7	45	450	180	.....	.....	.....	.....	.....	.....
Total.....	31	1605	61	371	3710	1284	.....	.....	.....	.....	.....	.....
<i>Gananoque Division.</i>												
Cornwall Division.....	1	10	1	1	100	50	.....	.....	.....	.....	.....	.....
<i>Muskoka Division.</i>												
Lakes Muskoka, Rosseau, Joseph, Portage, Leonard, Three Mile, Trading, Walker's, Vernon, Long, Round, Doe, Clear, Whitefish, Fairy and Peninsula	75	375	75	225	2250	900	....	(39 special permits for	.....	.....	.....	.....

Vessels, Boats, Nets, &c.—Ontario—Continued.

SIZE, VALUE, &c.			KINDS, QUANTITIES AND PRICES OF FISH.										VALUE.		TOTAL.			
Hoop Nets.			Scoop Nets.															
No.	Value.	No.	No.	Value.		Whitefish, barrels.	Whitefish, lbs.	Whitefish, No.	Trout, barrels.	Herring, barrels.	Sciscoes, barrels.	Mashinonge, barrels.	Bass, barrels.	Pike, barrels.	Pickeral, barrels.	Coarse Fish, barrels.	Total No. of barrels of Fish.	Value.
10	200					1000			5	2	4	6	20	20	80		80 00	
						1600			5	5	5	15		22	135		135 00	
15	240					200			2	25	10	49		33	205		205 00	
						2600			7	20	18	35		87	391		391 00	
						800			2	10	5	20		93	565		565 00	
						1000			4	10	4	10		41	235		235 00	
						600			5	1	2	1		33	210		210 00	
														12	75		75 00	
25	440					7800	13	10		50	63	97	69	341	1896		1,896 00	
						69			63		36		44		212	1720		1,720 00
10	200													80	.80	320		320 00
42	840													300	300	1200		1,200 00
15	300													115	115	460		460 00
						174			95		64		63		396	3325		3,325 00
						28			27		16		18		89	720		720 00
									100					100	600	400		1,000 00
						20			5		10		10		45	350		350 00
5	100					20			20		7		44		98	646		646 00
72	1440					311			310		133		142	539	1435	9341	400	9,741 00
														15	15	75		75 00
														10	20	20	15	500
														565	2075	250		2,325 00
angling were issued.)			4	15	17	31	31	31						43	310		310 00	

RETURN of the Number and Value of

STATION.	VESSELS AND BOATS EMPLOYED FISHING.						NETS, THEIR NUMBER, SIZE,					
	Vessels.			Boats.			Gill Nets.			Seines.		
	No.	Tonnage.	Value.	No.	Men.	Men.	No.	Rods.	Value.	No.	Rods.	Value.
<i>Lake Simcoe Division.</i>												
Orillia (Narrows).....	1	16	2	2	109	60	1	18	25			
Hawkestone	1	15	1	2	200	100						
Barrie	4	455	6	14	813	430						
Allandale	1	100	2	2	200	125						
Bell Ewart.....	1	16	1	1	70	35						
Point Mara.....	1	18	1	1	91	40						
(Spearing through the ice)												
Port Bolster	1	25	2							1	240	80
Thorah Island	1	25	2	1	200	50						
Beaverton	1	16	1	1	200	50						
Total.....	12	686	18	24	1883	890	2	258	105			
<i>Lake Scugog Division.</i>												
Port Perry and Lindsay	30	300	213							(213	special	permits for an
Cæsarea.....	45	450	318							(318	do	
Total.....	75	750	531							(531	do	
<i>Rice Lake and Trent River Division.</i>												
Peterborough and Victoria Counties Division.....	10	190	10									
<i>Charleston and Gananoque Lakes Division.</i>												
Charleston Lake.....	3	55	6	24	42	42						
Charleston Lake to Gananoque.....	Angling.	1	20	4								
Upper and Lower Beverly Lakes....	do	1	15	2								
From Lower Beverly Lake to Squaw Point	do	2	12	4								
Griffin Lake	do	1	10	1								
South Lake.....	do	1	10	1								
Total		9	122	18	24	42	42			(18	do	
<i>Mississippi River and Lake Division.</i>												
Madawaska River and Lake des Chats Division.		3	65	6								
Madawaska River and adjoining lakes.....		2	20	4								
Arnprior and mouth of Bonne Chère.....		8	80	8							do	
Sand Point and Bonne Chère River.....		6	120	20	6	210	36				do	
Total.....		16	220	32	6	210	36				do	

(Angling included).

Vessels, Boats, Nets, &c.—Ontario—Continued.

RECAPITULATION of the Number and Value of Vessels, Boats, Nets, &c., together with the Yield and Value of Fish, in the Province of Ontario for the year 1877.

NETS, THEIR NUMBER, SIZE, VALUE, &c.

No.	VESSELS AND BOATS EMPLOYED FISHING.		Gill Nets.		Seines.		Pound Nets.		Hoop Nets.		Scop and Dip Nets.										
	Divisions,	Vessels.	Boats.	No.	Men.	No.	Men.	No.	Men.	No.	Men.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
1	Lake Superior.....	3	103	4500	\$ 8	67	6965	155	461	26285	10765	(24 special permits for angling were issued.)	\$ 5	30							
2	Manitoulin Island and Lake Huron	2	15	1000	6	174	14879	715	4073	38272	33925	381	1635	5705	(124900	149 Trout Lines.)	13	150			
3	Georgian Bay	6	95	8100	17	151	10844	356	1650	104112	36095	32	561	1866							
4	Thames River and Lake St. Clair.....																				
5	Detroit River.....																				
6	Lake Erie.....																				
7	Niagara River and Lake Ontario	7	62	1330	28	88	1947	182	16	1248	756	30	145	1014	7050						
8	Prince Edward County and Bay of Quinté	2	16	600	4	140	4771	426	838	23300	10423	56	2830	834	1682	41	3357	14492			
9	Lennox and Addington Counties.....																				
10	Kingston.....																				
11	Gananoque.....																				
12	Cornwall.....																				
13	Muskoka.....																				
14	Lake Simcoe.....																				
15	Lake Sengog																				
16	Rice Lake and Trent River																				
17	Peterboro' County.....																				
18	Charleston and Gananoque Lakes																				
19	Mississippi River and Lake																				
20	Madawaska River and Lake des Chats																				
Total		20	291	15530	63	1247	52706	3804	7886	289954	100632	357	10748	30418	41	3357	14492	157	3940	57	113

Note.—1,345 special permits for angling were issued in 1877; 90 spears, \$270; 12 trout lines—4,900 rods—\$149.

RECAPITULATION of the Number and Value of Vessels, Boats, Nets, &c.—Ontario—Concluded.

No.	Divisions,	Kinds AND QUANTITIES OF FISH.						Value.	TOTAL.		
		Whitefish, lbs.	Whitefish, No.	Herring, barrels.	Selknoos, barrels.	Muskinooge, barrels.	Pike, barrels.	Coarse Fish, barrels.	Total No. of barrels.	Fresh.	Pickled.
1	Lake Superior	2178	74200	44142	42272	4262	70	2	5242	6875	\$ 62760
2	Manitoulin Island and Lake Huron.....	1419	1181000	2000	9102	289	36	31	72973	93687	69635 00
3	Georgian Bay.....	2266	149200	295800	190	445	12	302	39	531	44220 50
4	Thames River and Lake St. Clair.....	141	.....	.....	.....	4	14	183	45	12581 50	32659 70
5	Detroit River.....	615	107900	300	2772	7	10	3672	11724	12581 50	12581 50
6	Lake Erie.....	101	59600	943	4632	1495	32	120	216	46872	7158 00
7	Niagara River and Lake Ontario.....	9	296600	2950	7374	1980	10	116	248	1093	7158 00
8	Prince Edward County and Bay of Quinte.....	361	7800	13	10	.....	50	63	97	341	16516 00
9	Lennox and Addington Counties.....	311	.....	310	.....	.....	133	.....	142	539	1896 00
10	Kingston.....	.....	.....	.....	.....	.....	15	.....	1435	9341 00	1896 00
11	Gatineauac.....	.....	.....	.....	.....	.....	15	.....	15	400	400
12	Cornwall.....	.....	.....	.....	.....	.....	20	15	500	75 00	75 00
13	Muskoks.....	4	.....	15	17	.....	20	32	32	205 00	2325 00
14	Lake Simcoe.....	268	.....	619	45	.....	1	.....	43	310 00	310 00
15	Lake Senege.....	.....	.....	.....	.....	.....	120	2	.....	933	9000 00
16	Rice Lakes and Trent River.....	.....	.....	.....	.....	.....	500	400	.....	122	610 00
17	Peterboro County.....	.....	.....	50	5	.....	80	.....	30	900	4500 00
18	Charleston and Gananoque Lakes.....	3	.....	.....	1	.....	75	.....	46	240	1420 00
19	Mississippi River and Lake.....	50	.....	87	10	27	66	35	18	270	110 00
20	Madawaska River and Lake des Chats.....	.....	.....	.....	.....	.....	27	25	70	383	595 50
Total.....	.....	7776	1876300	301050	12526	10288	1805	7862	16242	55982	281218 00
									5157	29312	157005 438223 00

RECAPITULATION

OF the Yield and Value of the different Fisheries in the Province of Ontario
during the Year 1877.

Kinds of Fish.	Quantity.	Price.	Value.
		\$ cts.	\$ cts.
Whitefish.....	7,776 barrels at	10 00	77,760 00
do	1,876,300 lbs. "	.0 05	93,815 00
do	301,050 pieces "	.0 10	30,105 00
Trout.....	12,526 barrels "	10 00	125,260 00
Herrings....	10,288 " "	5 00	51,440 00
Sciscos.....	1,505 " "	5 00	7,525 00
Maskinonge.....	786 $\frac{1}{2}$ " "	5 00	3,932 50
Bass.....	1,624 $\frac{1}{2}$ " "	5 00	8,122 50
Pike.....	995 $\frac{1}{2}$ " "	5 00	4,977 50
Pickerel.....	2,931 $\frac{1}{2}$ " "	5 00	14,657 50
Coarse Fish.....	5,157 " "	4 00	20,628 00
Total Value of the Products of the Fisheries in 1877.....			438,223 00
do do 1876.....			437,229 70
Increase.....			993 30

No. 16.

SYNOPSIS OF FISHERY OVERSEERS' REPORTS IN THE PROVINCE OF
ONTARIO, FOR THE SEASON OF 1877.

LAKE SUPERIOR DIVISION.

JOSEPH WILSON,
JAMES DICKSON, } Overseers.

COMPARATIVE STATEMENT of the yield and value of the fisheries in this division:—

Kinds of Fish.	1872.	1873.	1874.	1875.	1876.	1877.
Whitefish, brls.....	1,953	2,275	2,580	2,117	2,043	2,178
do fresh, lbs.....		7,000			40,700	74,200
Trout, brls.....	1,252	1,500	1,684	955	3,392	4,414½
Pickerel.....	70					
Total in barrels.....	3,280	3,755	4,264	2,172	5,642½	6,963½
Value.....	\$19,384	\$18,045	\$42,640	\$21,720	\$56,425	\$69,635

Overseer Dixon reports having visited all the stations in his district and found the fishery laws and regulations well observed. In 1876 there were fifteen fishery licenses issued and seventeen fishing boats in this division; the catch amounting to 1,502 barrels. This season there were twelve licenses granted and twenty-one boats fishing; the catch amounting to 2,948 barrels, an increase of 1,446 barrels in the catch. About twelve per cent. of the catch was white fish. The principal fishing pursuit in this district during the whole summer is trout; white fish appear on the fishing grounds only late in the fall and remain in some localities until the ice takes fishermen in Thunder Bay being engaged fishing on the 15th of December with great success. On that day 700 white fish were caught with a small quantity of nets. In order to ensure better success, fishermen in this part of Lake Superior would require to stay over winter on the grounds, or, at any rate, until the ice forms.

The price of fish is higher in Chicago and other American markets than in Canada; the fish put up for Canadian markets being in poor condition. The fish are pickled in just enough salt as will keep them in cold climates, but when shipped east they spoil very quick. The consequence is that, farmers having bought one or two packages for home use find that they soon spoil, and will purchase no more. In the United States, merchants will not buy Lake Superior fish unless properly inspected and branded. Were our own merchants to adopt this rule, it would much tend to increase the demand and raise the price of white fish and trout in Ontario. The close seasons were well observed.

Overseer Wilson reports the catch of fish in his division as good, and no noticeable falling off in the yield. The following statement shows, as near as can be ascertained, the quantity and value of fish used for home consumption in this district:—

White fish, pickled.....	1,076 brls.	} value
do fresh.....	1,500 "	
Trout, pickled.....	575 "	\$16,585.
1—e 18½		

The close season for whitefish and salmon trout gives general satisfaction. The extension of the close time for speckled trout to the first of May, was attended with beneficial results. This Overseer paid a visit to Nepigon River in August and found everything satisfactory. Angling was better than for two years past, the water keeping in proper condition during the whole of the season. The system of compelling foreigners fishing in this stream to do so under special permits, for which they are required to pay a small fee, continues to work well. Twenty-four permits were granted this season, sixteen of which being to foreigners. The fees received amounted to \$62, which covers the cost of guardianship. The close seasons were well observed. Mr. P. McIntyre was prosecuted and had to pay \$42.50 fine and costs, for having fished during the close season in 1876.

MANITOULIN ISLAND DIVISION.

G. B. ABREY, *Overseer.*

Statement of the total yield and value of fisheries in this division, for the year 1877:—

Whitefish, brls.....	1,368
do lbs.....	
do No	2,000
Trout, brls.....	1,633
Total in barrels.....	3,021
Value.....	\$30,210

Overseer Abrey reports a fair increase in the yield of the fisheries of his division. The close seasons were well observed. Captains and Pursers of steamboats are now careful not to accept any fish suspected of having been caught after the close season. About 500 barrels of fish were used for home consumption in this district.

LAKE HURON DIVISION.

JAMES MUIR,
A. C. MCKINNON, }
DAVID McMMASTER, } *Overseers.*

Statement of the total yield and value of the fisheries in this division for the year 1877.

Whitefish, brls.....	51
do lbs.....	1,181,000
do Nos.....	
Trout, brls	2,594½
Herrings, "	4,262
Bass, "	70
Pike, "	2
Pickerel, "	524½
 Total in barrels.....	 13,409
 Value.....	 \$109,007 50

Overseer Muir makes no special report, having merely sent the fishery statistics of his division.

Overseer McKinnon reports a decrease in the catch of fish in his division as compared with that of previous years, which is mostly attributable to a slight falling off in the winter fishing. The several close-seasons were well observed, and no vio-

lations of the fishery laws were reported. The present close-time appears to give general satisfaction, and Overseer McKinnon does not deem it necessary to recommend any change. As near as can be ascertained, about two-thirds of the fish caught in this division are used for home consumption. Fishermen in this division will not send their fish to American markets so long as they can dispose of it at remunerative prices on our own markets. Mr. Hilliard has built a good fishway on his mill-dam, on the Maitland River, near Goderich. It is the only fishway in this division.

Overseer D. McMaster reports twenty-five boats engaged in fishing during the year, in his division, with twenty seines and seven thousand rods of trout lines, giving employment to twenty-two men during the season. The catch of herring is twenty-five per cent. below that of last year, whilst in other kinds of fish it is about the same. The decrease in the catch of herring is attributed to a less vigorous prosecution of fishing and incorrect returns. All the fish caught in this division were sold for home consumption on the spot, excepting pickerel which is exported to United States markets. The price of fish was on an average, ten per cent lower than in previous years. The close-season for pickerel is the only one liable to be broken in this district; this was effectually prevented this season by the ice remaining on the shore until the close-season was over.

GEORGIAN BAY DIVISION.

JAMES PATTON,	}	Overseers.
SAMUEL FRAZER,		
G. S. MILLER,	}	
ALEX. PROULX,		Guardians.
WM. McGOWN,		

Statement of the total yield and value of the fisheries in this division, for the year 1877:—

Whitefish, brls.	2,256
do lbs.	149,200
do Nos.	295,800
Trout, brls.	919½
Herrings, "	289
Pike, "	36
Pickerel, "	31
Coarse Fish, "	71
 Total in barrels.....	 7,297½
 Value.....	 \$70,769

Messrs. Patton and Mills merely send in the returns of the catch of fish within their respective divisions, and make no special reports.

Overseer Frazer reports the present fishing season as not so profitable as that of last year. He seems to be under the impression that the pollution of streams by sawdust and mill rubbish has more to do with the diminution of several kinds of fish than is generally supposed to be the case. The close seasons were fairly observed; the stormy weather experienced during the close-time for whitefish having assisted this Overseer to enforce the law. There is but one fish way in that division, on a small stream in the township of Medante. The value of fish caught and used for home consumption in this division amounts at least to \$1,000 a year.

LAKE ST. CLAIR AND THAMES RIVER DIVISIONS.

PETER McCANN, }
F. McRAE, } Overseers.

COMPARATIVE STATEMENT of the yield and value of the fisheries in this divisions :—

Kinds of Fish.	1875.	1876.	1877.
Whitefish, brls.....		299	141
do lbs.....			
do No.....			
Trout, brls.....		140	190
Herring, brls.....		500	445
Maskinonge, brls.....		1	1½
Bass do	39	96	302
Pike do		4	39
Pickerel do	1,302	492	642
Coarse fish.....	704	635	531
Total in barrels.....	2,045	2,167	2,291½
Value.....	\$10,225	\$12,395	\$12,581 50

Overseer McCann reports a falling off in the catch of fish for the last two seasons in the River Thames, west of Cashmere. Fishermen differ in opinion on the causes of such decrease. Some attribute it to high water at the time when pickerel runs; others to the thickness of ice, almost closing the channel of the river, or to too many nets for the size of the stream; but they all agree in stating that stopping seine-hauling for coarse fish during the close-season will increase the catch. There were more fish caught in the eastern portion of the river this season than for several years past. The heavy ice going down the river last spring slightly injured some fishways, but they were all efficiently repaired during the summer except one, which is now being completed. Several complaints were made to this Overseer last spring with regard to the refuse from oil works going into the river. He visited the several works, and the proprietors, with the exception of three; tanked the most objectionable parts of their refuse; the three will, it is expected, soon do the same. By visiting the works once a week, Mr. McCann expects to be able to put an end to all complaints, and no material injury will be caused to fish in the stream.

Overseer McRae sends no report.

DETROIT RIVER DIVISION.

ED. BOISMIER, *Overseer.*

Comparative Statement of the yield and value of the fisheries in this division:—

		1876	1877.
Whitefish, brls.			615
do lbs.			
do No		72,275	
Trout, brls.			
Herring, "		60	
Maskinonge "			4
Bass, "		2	14
Pike, "			
Pickerel, "		4	10
Coarse Fish, "		117	217
Total in barrels.....		1,051½	860
Value.....		\$8,025 50	\$7,158 00

Overseer Boismier reports a decrease of fully one-third in the catch of whitefish in Detroit River and in that portion of Lake Erie comprised in his division, as compared to that of last year. He also states that the fish-breeding establishment at Sandwich did good work this season in spite of several obstacles thrown in its way. From 20,000,000 to 25,000,000 eggs were gathered, and the number of good eggs now in process of hatching will amount to about 21,000,000. Considerable trouble was experienced in obtaining spawn, owing to the refusal of some fishermen to draw out the fish at the proper season. Eggs were obtained from the following parties: D. Norvell, Esq., Turkey Island; A. Rankin, Esq., Bois Blanc Island; Messrs. Meloche, Gerard and Clark, Fighting Island; and Mr. Daniel Meloche, Detroit River.

POINT PELEE DIVISION.

WILLIAM PROSSER, *Guardian.*

Comparative Statement of the yield and value of the fisheries in this division:—

Kinds of Fish.		1876.	1877.
Whitefish, brls.			161
do lbs.			10,500
do No		13,850	
Trout, brls.			
Herring, "		1,952	1,038
Maskinonge, "			
Bass, "		55	97
Pike, "			1
Pickerel, "		37	75½
Coarse Fish, "		131½	285
Total in barrels.....		2,341½	1,710
Value.....		\$12,131 00	\$9,332 50

Mr. Prosser states that the quantity of fish caught this season cannot be compared with that of previous years, it being late in the spring when pound-nets were set, owing to stormy weather. Several pounds caught nothing, others were torn and made useless during the best part of the fishing season. Fall fishing did not prove much better; the same stormy weather was experienced, heavy gales blowing alternately from east and west, destroying nets and causing all sorts of damage.

POINT PELEE ISLAND DIVISION.

JAMES CUMMINS, *Guardian.*

Comparative statement of the yield and value of the fisheries in this division:—

	1876.	1877.
Whitefish, brls.....	1,800	10,400
do lbs.....		
do Nos.....		
Trout, brls.....		
Herring, ".....	201	90
Maskinonge, ".....		
Bass, ".....	42	10
Pike, ".....		
Pickerel, ".....		
Coarse Fish, ".....	14	15
Total in barrels.....	<u>266</u>	<u>167</u>
Value.....	<u>\$1,361 00</u>	<u>\$1,080 00</u>

LAKE ERIE DIVISION.

JOHN McMICHAEL,
ALEX. McBRIDE,
C. L. BINGHAM,
HENRY LAW,
} Overseers.

Comparative statement of the yield and value of the fisheries in this division:—

	1876.	1877.
Whitefish, brls.....	300 $\frac{1}{2}$	
do lbs.....	7,045	87,000
do No	1,000	300
Trout, brls.....		
Herring, ".....	1,149	1,644
Maskinonge ".....	1	7
Bass, ".....	43 $\frac{1}{2}$	76
Pike, ".....	28 $\frac{1}{2}$	44
Pickerel, ".....	686	839
Coarse Fish, ".....	1,019	872 $\frac{1}{2}$
Total in barrels.....	<u>3,262</u>	<u>3,920$\frac{1}{2}$</u>
Value.....	<u>\$17,071 25</u>	<u>\$20,920 00</u>

Overseer McMichael, whose division comprises that portion of Lake Erie fronting on the county of Kent, reports a decrease in the catch of fish, caused by stormy weather during the fall months. Several pound-nets were carried away; the greatest part being seriously damaged. Some were destroyed three times during the fishing season. The close-seasons are reported as being strictly observed, and fishermen give no trouble on that account. All the fish caught is disposed of in the locality. This Overseer recommends a change in the close-season for whitefish, and that the same be extended ten days later, so as to read from 10th to 20th of November.

Overseer Bingham, who has charge of that part of Lake Erie fronting on the County of Norfolk, reports the catch of fish as being greater this year than in 1876, owing to a larger number of fishermen being engaged in this business. The season was, however, a severe one, the ice being very late in breaking up. Very few fish were caught during the spring. By the latter part of the season, heavy gales of wind occurred which caused great damages to pound-nets set in exposed localities. Some of them were entirely blown out. Had pounds been uninjured, the catch would have been considerable, the fish having visited the shores of this division in large numbers immediately after the gales, when some nets were still under repairs. The greatest portion of the fish caught in this division was taken by two pounds.

Overseer Law's district comprises the Grand River, from its mouth to Caledonia, as well as that portion of Lake Erie fronting on the county of Halldimand. He states that the yield of the fisheries in his division was larger than in 1876. Angling was also very good, and a large number of fine maskinonges were caught with hook and line. A small percentage of the fish caught in this division are used for local consumption; the rest is exported to the States. Violations of the fishery laws are frequent between Dunnville and Cayuga, but it is a difficult thing to detect offenders, as the people will give no information to the fishery officers.

NIAGARA RIVER AND LAKE ONTARIO DIVISION.

J. W. KERR,
CHAS. GILCHRIST, } Overseers.
ANDREW HUGHSON,

COMPARATIVE STATEMENT of the yield and value of the fisheries in this division.—

Kinds of Fish.	1872.	1873.	1874.	1875.	1876.	1877.
Whitefish, brls.	615	498	482	623	433	9
do lbs.	93,958	96,500				59,600
do No.	466				2,000	
Trout, lrls.	166	55	99	43	786	943
Herring, do	512	405	405	268	431	462
Sciscos do	219	288	134	188	304	1,495
Maskinonge, brls.	8	12	42	77	35	32
Pike and Bass, brls.	280	488	620	251	271	487
Pickerel do	261	444	723	156	337	216
Coarse fish do	653	780	798	236	524	744
Total in barrels	2,714	3,436	3,303	1,842	3,132	4,687
Value	\$16,601	\$25,899	\$24,783	\$13,542	\$21,286 50	28,943

Overseer Kerr reports that during the season fifty-one persons were fined for violating the fishery laws in his division, and that he also confiscated about 500 yards of gill nets for similar offences. The total value of the fisheries in this division during

the season amounts to \$28,943, which compared to last year's yield, shows an increase of \$7,656.50. The catch of siscos was large. These fish seem to have adopted the feeding ground of the whitefish in Lake Ontario and driven the latter away. The catch of whitefish and salmon trout was unusually small. This is partly to be attributed to the large quantities of these fish being shipped from Meaford, Collingwood and Southampton, and other places in Georgian Bay, to Toronto, deterring Lake Ontario fishermen from carrying on this branch of industry with as much energy and activity as heretofore. Herring fishing was fair and the fish caught of a superior quality. Burlington Bay was teeming with spawning herrings during the latter part of November and early in December. Fishermen who obtained spearing licenses did not, however, make so good a catch as in previous years, owing to stormy weather. Speckled trout still abound in the upper branches of Credit River, and they require protection. Salmon were accidentally caught at several places in Lake Ontario; one was caught at the mouth of the Rouge, and liberated; Mr. Black caught two at Frenchman's Bay; Mr. May, of Toronto Island, also caught two in a hauling seine and one in a gill net. A young salmon was caught by Mr. Gray, of Toronto, and liberated. At Winona, a salmon weighing five pounds was caught in a herring net. At Burlington Beach nine or ten salmon were caught in nets, the largest weighing seven pounds. This goes to prove that salmon are on the increase in these waters. At Duffin's Creek, salmon were seen from the 19th October up to the 24th November, when the last took their departure. Mr. Kerr himself counted forty spawning beds, and there appears to have been about fifty-five fish in the creek. In Lyons' Creek, six salmon beds were observed between the Grand Trunk Railway Bridge and the Kingston Road. Three fishways were constructed during the season on Credit River, which are now in good working order; others still require to be built.

Mr. Hughson states that mill owners on the Credit River are now doing great efforts to comply with the law respecting sawdust and mill rubbish. He also reports having successfully prevented illegal fishing during Sundays and the close-seasons.

LENNOX AND ADDINGTON COUNTIES DIVISION.

ALFRED KNIGHT, *Overseer.*

COMPARATIVE STATEMENT of the yield and value of the fisheries in this division:—

Kinds of Fish.	1875.	1876.	1877.
Whitefish, brls.....	46	18	.....
do lbs.....			7,800
do No.....		6,500	.....
Trout, brls.....	8	54	13
Herring, [do	4	48	10
Sciscos do		12	.....
Maskinonge, brls.....	10	20	.....
Bass do	8	14	50
Pike do	52	51	63
Pickerel do	92	89	97
Coarse fish do	124	146	69
Total in barrels.....	344	497 $\frac{1}{2}$	341
Value.....	\$1,994	\$3,124	\$1,896

The above returns show a large falling off in the yield of fisheries. The fishermen complain of the scarcity of fish this season, but no reason can be given to explain the large decrease in the catch. The present Overseer was appointed to replace Mr. Ralston.

PRINCE EDWARD COUNTY AND BAY OF QUINTE DIVISIONS.

CHARLES WILKINS,
 JOHN G. HICKS,
 WM. PLEWS,
 W. A. PALEN,
 PETER HUFF, jun.,
 DAVID CONGER,

Overseers.

COMPARATIVE STATEMENT of the yield and value of the fisheries in these divisions :—

Kinds of Fish.	1875.	1876.	1877.
Whitefish, brls.....	2,668	1,162	361
do lbs.....		114,825	296,600
do No.....		22,327	2,950
'Trout, brls.....	430	853	737 $\frac{1}{2}$
Herrings, do	1,945	2,608	1,980
Sciscoes do	8		
Maskinonge, brls.....	58		10
Bass do	24	10	116
Pike do	30	35	73
Pickerel do	77	31	248
Coarse fish do	232	1,999	1,093
Total in barrels.....	5,472	7,391 $\frac{1}{2}$	6,131
Value.....	\$43,293	\$49,539 95	\$42,617

Overseer Wilkins states that the yield of the fisheries in his division shows a decrease when compared with that of last year, and attributes this to uniform hot and dry weather prevailing during the summer which caused the fish to abandon the shore and seek deeper and cooler water. He also reports having inspected all the fishways in his division, and found them in good order. Large salmon were to be seen in the Moira, Trent and Shannonville Rivers, the result of the fry placed there by Mr. S. Wilmot some three years ago.

Overseer Hicks reports that the fishery laws were well observed in his division. The catch of coarse fish, such as muleats, bullheads, &c., was unsuccessful.

Overseer Plews reports the catch of whitetish and salmon-trout as small, but the yield of pickerel and bass as being much larger than last year. The close-seasons were well observed. This Overseer, as well as Messrs. Palen, Huff and Conger attribute the decrease in the yield to stormy weather which prevailed during the spring and the early part of the fall.

KINGSTON DIVISION—WOLFE AND AMHERST ISLANDS.

P. KIEL, Overseer.

COMPARATIVE STATEMENT of the yield and value of the fisheries in this division:—

Kinds of Fish.	1872.	1873.	1874.	1875.	1876.	1877.
Whitefish, brls.	310	151	302	694	256	311
do lbs.		1,500				
do No.		3,950				
Trout, brls.	554	418	272	325	217	310
Herring, do	12	12		12		
Pike and bass, brls.	77	182	591	317	46	133
Pickerel do	27	56	110	172	46	142
Coarse fish do	166	217	639	647	564	539
Total.....	1,146	1,036	1,914	2,167	1,129	1,435
Value.....	\$8,310	\$8,945	\$11,100	\$15,942	\$7,446	\$9,741

Overseer Kiel reports that several fishermen had to give fishing up in June and July, which is the best time for whitefish in this division, owing to the low prices offered. In some instances they were even requested by fish dealers to suspend fishing for a night or so at a time, as the latter found it impossible to dispose of the supply on hand. The yield does, nevertheless, in this division, exceed that of last season by 306 barrels, the total value being \$9,741. This Overseer states that the fish are increasing rapidly in his division. There appears to be in Lake Ontario double the quantity of whitefish and salmon-trout which were noticed ten years ago. This pleasing state of things Mr. Kiel attributes to judicious fishery regulations and to their strict observance. The only places where signs of decrease are noticed are in some bays where hoop-nets have been fished excessively. Mr. Kiel gives it as his opinion, based on personal experience, that the drowned lands along the Rideau Canal and some of the back lakes are the only places where hoop-nets should be allowed; these waters being inhabited only by catfish and eels.

A temporary guardian was engaged at a small sum to watch Gold Lake. He reports that the law was well observed.

PRESCOTT, CORNWALL AND GANANOQUE DIVISIONS.

JOHN MOONEY,
JOHN D. McMILLAN, }
HUGH THOMPSON, } Overseers.

Overseer Mooney reports that the fishery laws were faithfully complied with. It requires great activity to prevent illegal fishing. The people appear in general to be well satisfied with the law and cheerfully carry out its dispositions. The fish is evidently on the increase.

Overseer McMillan, who was appointed during the present season, reports the fishery laws as being well observed.

Overseer Thompson reports no violations of the law, with the exception of some attempted spearing by Americans during the close-season. The poachers were chased away.

MUSKOKA DIVISION.

W.M. E. Foot, Overseer.

Comparative statement of the yield and value of the fisheries in this division:—

		1876.	1877.
Whitefish, barrels.....		8	4
Trout do		6	15
Herrings do		18	17
Bass do			3½
Pickerel do		2	3½
Total barrels.....		34	43
Value		\$240	\$310

Seventy-two gill net licenses were issued during the present season, five of which, being for commercial purposes, paid a fee of \$2 each. The rest were issued free. Thirty-nine angling permits were also granted. Mr. Foot says he has every reason to believe that the fishery laws were well observed, and that illegal fishing and spearing are now the exception in his division. He confiscated only one net during the whole year. The settlers now fully realize the advantage of having the fishery regulations well observed.

LAKE SIMCOE DIVISION.

A. MCKENZIE, }
W. R. YOUNG, } Overseers.

COMPARATIVE STATEMENT of the yield and value of the fisheries in this division:—

Kinds of Fish.	1872.	1873.	1874.	1875.	1876.	1877.
Whitefish, brls.....	60	4,940	116	124	5	268
do No.....					19,250	
Trout, brls.....	46	2,930	308	347		619
do fresh, No.....					17,875	
Herring, brls.....	7	1	30	20	30	40
Maskinonge, brls.....					2	
Bass and Pike do		75			60	1
Pickerel do		2			1	
Total in barrels.....	113	203	454	491	543	933
Value..	\$1,010	\$1,677	\$4,390	\$4,836	\$5,830	\$9,100

Overseer McKenzie states that he was unable to detect any illegal fishing during the season. In accordance with instructions from the Department, he notified mill-owners on the Boyne, Nottawasaga, Pine and Mad Rivers, to build fishways on their dams. He reports fish-passes being baited on all the streams, with the exception of two, which are in course of construction. Several mill-owners had to be prosecuted for allowing sawdust and mill-rubbish to run into the water, the result being that these rivers, which are amongst the best trout streams in the Province, are now comparatively free from this nuisance. Fishing was good. Mr. McKenzie calls special attention to the number of large herrings caught with hook and line. A man is reported as having caught alone as many as 300 in one day. This abundance of fish was of great assistance to the poor of Barrie during the season.

LAKE SCUGOG DIVISION.

A. J. HARRINGTON, }
JOHN McALLISTER, } Overseers.

Comparative statement of the yield and value of the fisheries in this division :—

	1876.	1877.
Maskinonge, barrels.....	47½	120
Bass, barrels	3	2
Total in barrels.....	<u>50½</u>	<u>122</u>
Value.....	<u>\$252 50</u>	<u>\$610 00</u>

The waters of Lake Scugog being reserved for the natural propagation of fish, and no netting being allowed therein, five hundred and thirty-one angling permits were issued to Canadian subjects. Fishing was better than last year. The fishery laws were well observed.

RICE LAKE DIVISION.

CHARLES GILCHRIST, Overseer.

Comparative statement of the yield and value of the fisheries in this division :—

	1876.	1877.
Maskinonge, barrels.....	500	500
Bass, barrels.....	300	400
Total in barrels.....	<u>800</u>	<u>900</u>
Value.....	<u>\$4,000 00</u>	<u>\$4,500 00</u>

Mr. Gilchrist issued 733 angling permits in this Division, 42 of which were granted to foreigners ; the fees thereon amounting to \$140.

PETERBOROUGH AND VICTORIA DIVISIONS.

GEORGE COCHRANE,
JAMES SUTHERLAND, }
DANIEL BOWEN, } Overseers

Statement of the yield and value of the fisheries in these divisions for the year 1877 :—

	1877.
Trout, barrels.....	50
Herring, barrels.....	5
Maskinonge, barrels.....	75
Bass, do	80
Coarse fish do	30
Total barrels.....	<u>240</u>
Value	<u>\$1,420 00</u>

In Mr. Cochrane's division, the yield of the fisheries is reported as being somewhat below that of last year, owing to the low state of the water. Sawdust continues to be thrown from mills into the stream, but the practice of throwing edgings has been abandoned. The close-seasons were well kept.

Overseer Sutherland reports the fish as increasing in the streams and lakes of his division. This he attributes to the practice of throwing sawdust and mill-rubbish from the mills into the water being abandoned. The close-seasons were well observed. Ten thousand salmon fry were placed in Balsam Lake last summer, and will, it is hoped, thrive there.

Mr. Bowen reports the fish as increasing in his division, owing to the fishery laws being generally well observed.

The fish caught in these divisions are mostly used for home consumption, very few being sold.

CHARLESTON AND GANANOQUE LAKES DIVISION.

DAVID HAMILTON, *Guardian.*

Comparative statement of the yield and value of the fisheries in this division :—

	1876.	1877.
Whitefish, barrels.....	2	3
Trout, do	15	9
Herring, do	$1\frac{1}{2}$	$\frac{1}{2}$
Bass, do	63	46
Pike, do	68	50
Coarse fish, do	$203\frac{1}{2}$	17
 Total barrels.....	 353	 $125\frac{1}{2}$
 Value.....	 $\$1,646\ 50$	 $\$670\ 50$

Mr. Hamilton issued 18 angling permits, five of which to foreigners; the proceeds thereon being \$21.

The fish do not appear to be materially decreasing. This Overseer states, however, that a large number of whitefish were found dead in Lower Beverly and Charleston Lakes last summer, owing, it is presumed, to the impurity and shallowness of the water, which was retained for the mills at the lower end of the Upper Beverly Lake. The fishery laws and regulations, as well as the close-seasons, were well observed.

LANSDOWNE, ROCKPORT AND BROCKVILLE DIVISIONS.

JOHN WALLACE,
HENRY HUNT,
Jos. L. THOMPSON, } *Guardians.*

The local guardians of this division agree in reporting the fish on the increase, and attribute this desirable state of things to the prohibition of net fishing. The fishery laws were generally well observed, excepting a few cases of spearing, which were detected and soon stopped.

MISSISSIPPI RIVER AND LAKE DIVISION.

JAMES MCFADDEN, *Overseer.*

Comparative statement of the yield and value of the fisheries in this division :—

	1876.	1877.
Bass, barrels.....	12	18
Pike do	150	270
Pickerel, barrels	25	25
Coarse Fish, barrels.....	30	70
 Total barrels.....	 217	383
 Value.....	 \$1,055	\$1,845

Overseer McFadden reports an increase in the yield of the fisheries. This he attributes to the large number of persons who had to resort to fishing for food, owing to want of other employment. Fines, amounting to \$22, were imposed during the season upon persons who violated the law ; two nets were also confiscated.

MADAWASKA RIVER AND LAKE DES CHATS DIVISION.

JOHN LYON,
ANDREW TELFER, } *Guardians.*

Comparative statement of the yield and value of the fisheries in this division :—

	1876.	1877.
Whitefish, barrels.....	30	50
Trout do	90	87
Sciseos do		10
Maskinonge do	35	27
Bass do	40	66
Pike do	75	30
Pickerel do	55	63
Coarse Fish do	120	103
 Total barrels.....	 445	436
 Value.....	 \$2,705	\$2,762

Both Messrs. Lyon and Telfer report the close-seasons as having been well observed in their divisions.

No. 17.

REPORT OF THE INSPECTOR OF FISHERIES FOR BRITISH COLUMBIA
FOR THE YEAR 1877.

VICTORIA, B.C., 21st January, 1878.

HON. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have had the honour to address your Department several times during the past fortnight on matters connected with the fisheries in this Province, in anticipation of the General Report, which I now respectfully submit.

As you will perceive by the accompanying return statement, a very great increase in the value of the fishing industry has signalled the past year, due partly to the extension of the amount of capital invested, and the increased number of firms engaged; and partly to the heavy run of salmon which last summer ascended the Fraser. For this fluctuation in the annual run of the salmon, no cause, other than natural causes, can be assigned; and in considering these natural causes, due regard must be had to the peculiar nature and habits of the salmon frequenting these waters, to which attention has already more than once been drawn.

This fluctuation, or, in other words, this periodical increase or deficiency of supply, has been noticed ever since the early settlement on the Upper Fraser by the North-West Company in 1806. It has been observed by myself and former colleagues of the Hudson's Bay Company, including the late Sir James Douglas, for very many years, and therefore, I trust, will be accepted as an established fact; and equally, therefore, to ascribe the strange variation to adventitious causes, of recent origin, is to err, as I conceive, very gravely.

While anxious to avoid the appearance of dogmatism, I am constrained again to ask your attention to the fact already so often insisted upon by me, and which I now re-assert even more forcibly than before, namely: *that these salmon, unlike their Atlantic congeners, do not return to the sea after spawning; they perish after that natural function is performed.*

It follows that they must remain in the salt water until they attain maturity, when, impelled by the natural instinct, they resort to the places where they were bred, there to consummate the final act of their existence. I say it follows, for it is to be noticed that in the ascending shoals none but mature fish are to be discovered. The individuals of each distinct shoal—however much the several varieties of fish may differ from each other, as they do, in size and quality—do not differ among each other. They are all of the same, or nearly the same, magnitude; but all of equal age, so far as the conditions of size and maturity can guide the judgment. There is no variation of *grilse*, or other definition, by which the salmon of the Eastern, American or European streams may be distinguished.

Meanwhile, the immature fish of all the different varieties may be caught in all the narrow waters along the sea coast, varying in size and development, presumably as more or less advanced towards maturity. In these localities the salmon eagerly take the bait; but after entering the rivers neither the bait nor the artificial fly has any allurement for the ascending fish.

The inference to be drawn is, that the supply of spawners for each year will depend upon the number of young fish that descend to the sea some years previously. What the precise period of this cycle may be it is not easy to define; for accidental causes of some inscrutable nature seem to interrupt the rotation

occasionally. My own opinion, and that of most others who have given attention to the subject, is, that four years may be stated as the most probable period; and this view coincides with the observations formerly made by the officers of the Hudson's Bay, generally, in the interior. But, as I have said, it is impossible to account satisfactorily for the disturbances which occasionally occur.

I have gone somewhat minutely into the question of the death of the salmon of these waters after spawning; firstly, because I consider the fact to bear directly upon the fact of salmon preservation or propagation, by artificial means in this Province; and, secondly, because the assertion of the fact has, I am aware, been received with some incredulity abroad, and is still, perhaps, doubtfully accepted, even here, by some who, with limited means of observation, either cannot perceive, or pertinaciously ignore facts which a more extended, or more accurate, observation would teach them are unimpeachable. In order, however, that my unsupported testimony alone should not remain, I refer you again to the references made in my Report of last year to the Report of the United States Commissioner of Fisheries, 1872-3, pages 191, &c.; and I subjoin, further, an extract from a work which I have only recently received from the Smithsonian Institution, in which the observation of the fact is again distinctly stated.

"A substantial timber grating was built across the stream (the McLeod branch of the Sacramento) somewhat in the style of that used by Professor Rasch in the fiords of Norway. Below the fence large corrals or pens were erected, into which the salmon were gathered and retained until their spawn was needed. The grating was an entire bar to the salmon, no opening being left to permit their passing above it, and the experiment satisfied Mr. Stone that salmon which ascended the river to spawn never returned to the sea. The number which had passed above the grating before it was finished, he estimated at hundreds of thousands, while thousands crowded against its lower sides when completed, vainly attempting to pass. As to their return, he failed to discover a single live salmon, though thousands of dead ones lodged against the upper side of the grating." *Professor Baird's Report to United States Commission of Fisheries, 1873-4, and 1874-5, page 23.*

The above, I may add, corresponds with the statement of Mr. Stone previously referred to, and corresponds also with observations made by myself during a series of years, long past, on the Upper Fraser, under the most favourable circumstances, and with a result no less conclusive.

To the question of the erection of a breeding-house for salmon in this Province, I have already, on several occasions, adverted; and only recently I had the honour to submit a proposition wherein the subject was brought more directly and tangibly Letter, 7th before you. As stated in my letter, the objects to be attained are Jan., 1878—chiefly: (1) To secure a regular annual supply of fish, supplementary of the irregular natural supply before noted; and (2) To

introduce the large and valuable salmon (*S. Quinatt*) of the Columbia River. Both these objects are of importance; but, in addition to these, there is the propagation of other kinds of fish, which might advance collaterally, though subordinately, to the first. Should the proposition submitted to you be favourably entertained, I respectfully suggest that an expert from Ottawa, who has adequate practical experience, should be sent on at as early a date as possible, to make the necessary observation and select a site. There is no one here or hereabout who has any practicable knowledge of the subject, though, doubtless, here as elsewhere, many a sciolist, who, if asked to undertake the work, would readily do so, and as readily spoil it.

For procuring the spawn of the *S. Quinatt* there is no position so favourable, I think, as that suggested by me in my last year's report, namely, the Anon Lakes of the Columbia River. Thence, by the way of the Eagle Pass, the impregnated spawn might be easily conveyed to a hatchery situated on the waters of the Thompson tributary of the Fraser. A point specially favourable for the purposes of such an establishment, it struck me during my examination of the past summer, is near the issue of the Great Shuswap Lake, or somewhere in that vicinity. The decision

of this question, however, in the event of proceedings being taken, would necessarily rest with the experienced person who may be appointed to superintend the operation.

ALLEGED ABUSES OF THE FISHERY DURING THE PAST SEASON.

With regard to these, while replying to your communication of the 27th August last, I ventured generally to state my conviction before hand, that some of the stated abuses did not in reality exist, and that others, if at all existing, were, at best, gravely exaggerated in the representations that had been made to you. Referring Letter, 27th generally to the tenor of that letter, I may now state that, on enquiry, I Sept., 1877—have since found that the view I had taken was not wide of the truth. To B. deal briefly with the charges, *seriatim*.

1. The charge that the Indians destroy millions of young salmon which they dry for food, and also that they wastefully destroy salmon in the spawning grounds, is, [A. Grégoire's conceive, sufficiently disproved by the deposition of Mr. Antoine Grégoire, Statement, already forwarded. I may add that at every point where I have been, 24th Sept., 1877—C. I have enquired rigidly into this alleged destruction of the young fry, and, notwithstanding the positive assertion made, I have yet failed to discover where the practice exists. Of course, should it be found to exist anywhere, measures will be at once taken to stop it; for the present I am quite incredulous of the charge. With regard to the rest of the statement, as affecting the Indians, I have already more than once expressed my conviction that their modes of catching the salmon in the upper waters—to them an necessity for food—is inobjectionable. Any interference with the natives, therefore, under hastily formed judgment or frivolous pretext, would be imprudent as well as unjust.

2. With regard to the alleged waste at the Canneries.

When I first saw this charge (which by the way appeared in the newspapers) I at once inferred that the reported destruction of fish arose from some accidental cause; for I could not admit the possibility that the shrewd owners of the canneries would seek to buy the salmon, only to throw them away afterwards. The letter of Messrs. Finlayson & Lane in reply to the written enquiry which I at once made on the subject, I have already forwarded, and to it I respectfully refer you. You will thence perceive that, owing to an over-catch of salmon, in consequence of the enormous rush, and the number of nets out at the outset, they were unable to cure the fish fast enough, and the weather being very hot, a large number spoiled upon their hands, and were necessarily destroyed. To guard against a recurrence of the accident, the number of nets was at once reduced, and no further loss occurred. At another cannery, too, (Messrs. English & Co., I believe) a loss was sustained by the scalding, accidentally, through discharge of steam, of a boat load of fish while in tow of a small steamer. With these exceptions I have been assured no serious loss was sustained; and I have also been assured, in the strongest manner by the owners of the different canneries, that no wanton waste was permitted. At the same time I do not question that, for want of an authority on the spot to enforce the observance of necessary restrictions, much disorder, and probably consequent waste, prevailed; and it was under this view that I had previously represented to you the expediency of having a resident fishery officer at New Westminster. The authority to make this appointment I afterwards received, but too late in the year to make it available for the past season.

3. With regard to the curing of the bellies of the salmon, and the alleged throwing away of the backs.

As mentioned in my letter previously referred to, it has long been partially the practice of the fish-curers on the Fraser to preserve these different portions of the fish separately, by salting. I have since ascertained that, at the canneries, the bellies of some of the fish are cured by salting, while the backs are canned, being found to serve the purpose as well as the unutiliated fish. This was the case in the instance explained by Messrs. Finlayson & Lane. The bellies of the fish had already been secured by salting; the backs alone had to be sacrificed—not of set purpose, but reluctantly, under the accidental circumstances related.

Letter, 12th Sept., 1877—4. Upon the subject of fish-traps, I have already reported. One trap only was erected on the Lower Fraser, and this, with my sanction, "provided that it did not interrupt the navigation," or interfere with the other fisheries.

On enquiry since, I find that it did neither. The whole thing, however, was a failure. Two salmon only were caught; the trap was abandoned, and speedily went to pieces, I am informed. Indeed, the whole matter has become, in connection with the needless alarm hastily expressed by one or two individuals, a topic of ridicule in New Westminster. I do not think it likely that the scheme of erecting two fish-traps in that locality will again be attempted; but I perceive nothing in the General Fisheries Act which declares the system, if attempted, to be illegal. The contrivance in question is not a trap-net, the use of which I notice is prohibited, but a fascine arrangement, which is permitted (section 12, page 9).

LEASES.

An application has been made to me by Mr. J. S. Deas, the proprietor of a cannery situated near the mouth of the Fraser, for the privilege of leasing for a term of years the exclusive use of certain "drifts" for the catching of salmon in that vicinity. This application I forward. Mr. DeCosmos, M.P. for Victoria, also spoke to me recently about a person, not named, who was desirous of obtaining a similar privilege at some point not specified along the coast. In view of the complications connected with existing Indian rights, and for other reasons, I think that this question should, for the present, be left in abeyance; and in any case be very cautiously entertained hereafter. I refer you to my reply to your enclosure of 13th Jan., 1878—November last, containing copy of the letter to you of the Deputy of E. the Minister of the Interior concerning Indian fishing-rights.

FISH-WAYS.

There is only one fish-way in this Province, none other, so far, having been reported as necessary. This is at the dam at the outlet of Shawinigan Lake, alluded to in my Report of last year. On mentioning the subject to Mr. Sayward, the proprietor of the dam, that gentleman at once undertook to construct the way. I have not yet had the opportunity of examining it; but as minute instructions and a diagram were supplied to Mr. Sayward, I assume it to be effective.

I respectfully submit some suggestions for the repeal or modification of certain portions of the Fisheries Act, in its application to this Province.

1. Clause 7, page 4, (*Close Season for Salmon.*)

That this clause be annulled. Its application would almost neutralize the fisheries. The salmon, especially of the Fraser, do not compose a single shoal of one variety, running continuously for a certain period; but a series of shoals of widely different character, following successively, at intervals, from early spring till late in the autumn.* Were any fixed date of cessation of the fishery to be insisted on, the later shoal, running at the best irregularly, would escape entirely, the product of the fishery would be greatly reduced, while no ulterior benefit of any kind would be produced.

* P.S.—Since writing the above, the following memorandum has been kindly supplied to me by Mr. J. S. Deas, of Fraser River, founded on his experience of six years or more at his fishery on that stream:—

- 1st run of large salmon (*Savguāi*), about 15th March.
- 2nd run of large salmon (*Suck-Kāi*), first week in July; continues about 30 days.
- 3rd run of (large salmon), second week in August
- 4th run (*Cohnes*), first week in September; continues into October.

(N.B.—The subsequent runs are of inferior varieties, which spawn in the lower streams, and are not useful for canning or curing for mercantile purposes.)—A. C. A.

Proportion of yield relatively to the whole catch computed as under:—

1st run	10 per cent.
2nd run	50 do
3rd run	20 do
4th run	20 do

N.B.—The section (3, page 5) relating to foul salmon becomes of itself a dead letter. There are no "foul or unclean salmon" here, in the sense contemplated in the Act, for, as I have, I trust, conclusively shown, these fish, after spawning, do not return to the sea, but perish. Therefore to employ them for manure or other purpose, would only be to utilize what must else be wasted. I mentioned in my last report that thousands of tons of dead or dying fish might have been collected for any purpose within the area of my last winter's travel.

2. To provide for a close time in the only practicable way, I suggest a modification of the general prohibition 14 (page 9), to read thus:

"From the time of low water nearest to six o'clock in the morning of Saturday to the time of low water nearest to the evening of Sunday, in the tidal waters; and from six o'clock in the morning of Saturday, to six o'clock in the evening of Sunday, in fresh water."

The object of this alteration, by which equally thirty-six hours of respite would be provided, is to meet the views expressed by the proprietors of canneries at New Westminster, who state that under the first arrangement, Sunday would necessarily be a busy day in order to secure the fish caught on Saturday, while Monday would be a vacant day for want of fish, and *vice versa*.

3. The section (2) at page 10, might be suspended as far as regards fish-offal. At New Westminster it would be impracticable to get rid of it, consistently with the public health, in any other way than, as heretofore, by casting it into the river. It produces apparently no deleterious effects; and, it is asserted, disappears almost immediately before the innumerable small fishes that crowd the neighbourhood of the wharves.

4. Section 7 close 7 (page 5).

The portion of this section relating to the rod and line is nugatory here, as the salmon of these waters do not take the fly. The Fishery Officer, however, should have full authority to define the limits above New Westminster, that the boats from that place should be allowed to proceed.

Referring again to my letter previously cited, concerning Indian fishing rights, I respectfully repeat here the opinion therein expressed, namely, "that, as a rule, the provisions of the Fishery Act, as modified to suit the exigencies of this Province, shall not be deemed to apply to Indians, working to supply their own wants in their accustomed way." I may repeat here, too, a passage of my last year's report, having reference to the same subject—"that the native modes of fishing, simple but efficacious throughout the Province, are in all respects unobjectionable and economical; and that any interference with their proceedings would be unadvisable, save when, through bad example, they infringe a general protective law—as in the case of the occasional use of explosive compounds before referred to" (now no longer practised).

The recommendation I here make, founded on obvious and very forcible reasons, is, I may add, in conformity with a provision of an Act of the Legislature of the neighbouring territory, recently passed for the protection of their fisheries, as under:

"Section 3. The provisions of this Act shall not apply to Indians in the Indian country of this territory."

YIELD OF THE FISHERIES.

Accompanying this is a statement of the return of the fisheries for the past year. It has been compiled with much care, chiefly from the notes supplied to me by the proprietors of the several fisheries, and procured from other authentic sources of information. I have found it impossible, however, to obtain accurate returns of the quantity of fish oils actually procured at the many outlying stations; but the result, as given, will be found not to deviate widely from the truth. It will be perceived that the total exceeds half a million of dollars (\$583,432)—a notable increase upon the showing of last year. Of this the Customs returns shows to have been exported (\$456,600)—leaving a value of \$126,832 to cover what has either been reserved for home consumption, or may be still on hand for exportation.

The encouraging result of the past season's operations will doubtless incite others to enter the field; and I foresee that a wide extension of the industry will shortly ensue. In its prosecution there is great room to encourage the Indian population; and under careful management they will continue to be, as they now are, of the greatest utility as fishermen, while deriving themselves substantial profit in return for their labour. In view of the probable extension of the operations of the coming year, however, and to the possible complications which may then ensue, it may be found necessary to appoint other Fishery Officers (Overseers or Wardens, as the case may demand) in addition to the appointment which I am already authorised to make, but which I have so far deferred making, under the circumstances Letter, 10th Jan., 1878—explained by me in a recent letter, to which I respectfully refer you. I suggest that conditional authority be given to me to make such appointments when necessary.

29th January.

I have kept this Report open in the hope that I should be able to include in it some points of information which I expected to obtain, but in which expectation, owing to circumstances, I have been disappointed. As the Members for the Province leave for Ottawa to-morrow, and I am anxious that you should receive this Report without further delay, I am constrained to close with a few general remarks, in less detail than I had intended.

With regard to the *herring fishery*, mentioned in my Report of last year. For the first time, I believe, the attempt to cure these fish for exportation has been made. As appears by the Return, between five and six hundred barrels (or half-barrels?) were put up by Messrs. Holbrook & Co., of New Westminster, the greater portion of which has been exported to South America. These fish were caught at Burrard Inlet, in due season. Should the result of the experiment be satisfactory, a field of industry of almost boundless extent will be opened.

The *Oold-han* fishery has been partially prosecuted, and with success. I have not been able to communicate with Mr. Robertson, the proprietor of the fishery establishment, situated on the Nass River, and am indebted to Col. Powell, Indian Superintendent in Victoria, for what information I have obtained concerning the last season's proceedings. Mr. Robertson, provided with a certain steaming apparatus, the details of which I have not learned, started his business in March last, and was prosecuting it very successfully, when, through some magisterial influence which seems to have been perfectly uncalled for, his operations were interrupted at the most critical period. In consequence of this unfortunate interference the quantity of oil secured was much less than it should have been; but I am glad to understand that the Provincial Government, on the case being represented to them, at once took steps to prevent a recurrence of the proceedings complained of.

Col. Powell informs me that, as he is informed, Mr. Robertson employs the natives to catch the fish, either purchasing the fish from them or employing them on wages, at the rate of one dollar and a quarter a day. The Indians, consequently are well satisfied at Mr. Robertson's presence among them, and in this connection I may add, that I think it would be a profitable policy, in the event of further establishments along the coast, were the same economical and conciliatory system decided on. The whole of the oil, procured by Mr. Robertson and others, was eagerly purchased by the natives of the neighbouring coast, at the rate of one dollar per gallon, so that none remained for export, so as to test the extraneous market; but, as I have elsewhere remarked, this oil—prized by the natives solely as an article of diet—is valued elsewhere for divers purposes. Col. Powell has kindly undertaken to procure for me some samples, which, when received, will be forwarded to Ottawa for your inspection. With increased appliances, and secure, it is to be presumed, from interruption, Mr. Robertson anticipates a rich return from the coming season.

An establishment for collecting dog-fish oil was formed on Queen Charlotte Islands, last spring, and proceedings on an extensive scale were contemplated. The operations of this concern seem to have been a failure—chiefly, as I understand, because White fishermen, at high wages, were employed, while the more economical services of the native fishermen were not utilized. Elsewhere along the coast, at many scattered points, other fishermen, working for themselves with their own boats, have prosecuted this industry with great success.

None of the other fisheries along the coast, so far as I can learn, have attracted much attention. It is only, however, a question of time; and I am persuaded that ere long, as the resources of these waters become more fully appreciated, other branches of this industry will attract attention and become profitably developed.

In conclusion, I respectfully draw attention once more to the subject mentioned in the concluding paragraph of my last year's Report, namely, the exceptional position which this Province occupies, in relation with the other Provinces of the Dominion, as to the advantages that may be supposed to attend the provisions of the Washington Treaty. I do not know whether, during the sitting of the Commission of the past year, this subject may have been mooted—or whether, indeed, it questionably came under the objects for which that Commission was appointed. I may say, however, that, while the view taken by the United States authorities acts directly as an impediment to the fishing interests of this Province, and especially of the oil interest, it is probably of little benefit in any way to our neighbours. It is a direct incentive to smuggling; and this smuggling with a long and rugged coast-line, it will be difficult to prevent. The Indians, tempted by the somewhat higher price which the traders on the opposite side can afford to pay, lose no opportunity of conveying their oil across the Strait to a dearer market. In this way, I am creditably informed, some 10,000 gallons or more were last year taken over to the vicinity of Neats Bay alone; and though, I believe, some seizures were made elsewhere, the aggregate quantity thus introduced was, I do not question, considerably in excess of what I have stated. It is sufficient for me, however, to ask your attention to this question; and though it may not be in your power to influence our neighbours towards the adoption of a more liberal policy towards us, it is not therefore the less advisable that the anomaly of our position should be fully understood.

I have the honor to be, Sir,
Your most obedient servant,

ALEX. C. ANDERSON,
Inspector of Fisheries, British Columbia.

A.

VICTORIA, B.C., 7th January, 1878.

W. F. WHITCHER, Esq.,
Commissioner of Fisheries,
Ottawa.

SIR.—Referring to your letter of the 27th August, and to my reply of the 27th September last, I have now the honour to enclose duplicate of a letter received by me from Messrs. Finlayson and Lane, having reference to certain charges which had been made in Ottawa against those gentlemen.

With reference also to a previous enclosure concerning a complaint of the construction of a fish-trap below New Westminster, upon which I have already partially reported, I have since had the opportunity of making full enquiry into the alleged abuse, and I find that the complaint has been almost ludicrously exaggerated as to anticipated effects.

The whole thing was a failure. *Two salmon* only were caught in this formidable instrument, and it was accordingly soon abandoned. It was situated entirely out of the course of navigation, and, in short, the whole ground of the complaint was fallacious and uncalled for.

I have the honour to be, Sir,
Your obedient servant,

ALEX. C. ANDERSON,
Inspector of Fisheries, B.C.

NEW WESTMINSTER, 3rd December, 1877.

A. C. ANDERSON, Esq.,
Inspector of Fisheries,
British Columbia.

SIR,—We beg to acknowledge receipt of your letter of the 27th September last, and, in reply, we beg to say, that the salmon canned in our establishment were furnished to us at two cents per lb., under contract by Mr. S. W. Herring of this place. We fancy the charge made against us, of wasting fish, to the Minister at Ottawa, is based on the result of a miscalculation on the part of the contractor, and occurred in this way: On the 19th July Mr. Herring caught an unusual quantity of fish, a large portion of which he bellied for salting; the backs he handed to us for canning. As the weather at this time was very warm, probably about 3,000 backs of salmon spoiled before we were able to put them in cans. These fish, we believe, Mr. Herring threw away, but with this exception, we are not aware of one fish being destroyed that was fit for canning. To avoid a recurrence of this waste of fish, we requested Mr. Herring to withdraw the most of his boats, which he immediately complied with, and thereafter only employed a sufficient number of boats to keep the cannery supplied. We are not aware of any undue waste that has occurred at any cannery in this district except by misadventure. We believe, on one occasion at one of the canneries, they lost about 1,500 fish while transporting them from the drift to the cannery, by the discharge of steam from the steamboat coming in contact with the fish in the barge alongside, which rendered them unfit for canning; but this was entirely accidental.

You may be sure we will be glad to assist you in any measure it may be necessary to adopt, with a view to prevent the useless destruction of salmon in the Fraser River. We are directly interested in the preservation of these fisheries; for the failure of the salmon to visit this stream would render our property here valueless.

Without presuming to advise, we would venture to suggest, that, in the event of your recommending any restrictive rules for the regulation of the fisheries on this river to the Minister at Ottawa, that they should be of such a nature as not to hamper or discourage an industry which is yet comparatively in its infancy; but we have every confidence that from your long business experience and intimate knowledge of the requirements of this fast increasing and important trade of British Columbia, that you will only suggest such measures to the authorities as will be best for the interests of the Province, and meet the approval of those interested.

There have been put up this year about sixty thousand cases, 4 dozen 1 lb. tins, of which number we contributed 11,966 cases. The aggregate expenditure for labour and supplies has cost over a quarter of a million dollars, and probably exceeds the disbursements of the old established canneries any previous year nearly tenfold; consequently the advent of Messrs. English & Co's. establishment and ourselves, this year, has been of much benefit to the people in this locality, and we are glad to say that our business relations with the good people of this burgh have been of the most cordial and pleasant nature, and we have every reason to believe that this sentiment is fully reciprocated.

Although we have not yet received a full return of our shipments of salmon, we have reason to believe the result of our first year's operations will turn out satisfactory.

We would have answered your letter some time ago, but we expected to have the pleasure of meeting you personally long ere this.

Trusting you and the gentlemen associated with you in your diplomatic duties with the natives, have accomplished satisfactorily the object of your mission to the interior,

We are, Sir,

Yours very respectfully,

FINLAYSON & LANE.

B.

CAMP,
GREAT OKANAGAN LAKE, B.C.,
27th September, 1877.

To the Hon. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

Sir,—I have the honour to acknowledge the receipt of your letter of the 27th ult., stating that: "It is reported to your Department that the clauses of the *Fisheries Act* relative to the protection of salmon are openly and shamefully violated in the Province of British Columbia generally, but especially on Fraser River, where Indians and White men seem to have leagued in this work of destruction, &c."

Without knowing the source from which this comprehensive statement has reached your Department, I may at once state that it is without valid foundation, and in its general purport, may be distinctly and unreservedly contradicted.

With reference to some of the special points adduced, I beg respectfully to remark as under:—

1. With regard to the accusation referred (or rather repeated) against the Indians, namely, that they destroy "millions of young salmon." I beg to refer you firstly to my letter to you of the 12th June, 1876, wherein the charge was refuted, as far as my own personal knowledge and conviction went, and secondly, to a deposition by a competent witness of wide experience, which I now have the honour to enclose, and which confirms my previous statement. The general charge of the destruction of the young salmon being thus, I conceive, sufficiently answered (though further confirmation of my view, if necessary, is quite attainable), I shall endeavour to obtain, if possible, some tangible accusation against a particular tribe or locality, if any there be, and of course make due enquiry. If then found to exist the evil will be corrected. I do not, however, conceal from you my persuasion that the charge is altogether unfounded.

I repeat, also, the opinion advanced in my letter already referred to, that "as a rule I believe the native modes of fishing to be altogether unobjectionable, and economical, and that any interference with their proceedings, under these modes, would be unadvisable."

2. That traps are set in the rivers.

As regards the Indian weirs (if these be alluded to) I believe them to be quite innocuous. I respectfully refer you to the passage just quoted above, and also to a portion of Grégoire's deposition herewith. The only trap set by any White man, that I am aware of, is that established this summer below New Westminster, upon which subject I have already had the honour to address you, under date the 12th instant.

3. From my personal knowledge of the respectable gentlemen who own or conduct the several fishing establishments on the Lower Fraser, and the Skeena, and my knowledge of the deep and permanent interests they have at stake, I should be

very cautious of accepting the statement of any wanton abuse on their parts of their fishing privileges. At an official interview which I held in June with the majority of these gentlemen, they were unanimous in the expression of the desire to co-operate with me in any measure to protect and foster the fishery; indeed they voluntarily expressed their willingness to contribute materially in aid of the outlay that might be necessary towards this end. The charge that "Messrs. Finlayson and "Lane are said to have thrown away over 3,000 salmon *in one day*, being unable to "cure them fast enough," may possibly have a foundation on fact. But that this act was done wantonly and wastefully, I do not credit, nor is it probable. The true explanation of the charge (if admitted) will, I think, be found to be that, owing to the extraordinary run of salmon (with large appliances for catching in anticipation of an ordinary run only) an overwhelming surplus was at first unexpectedly caught, which could not be disposed of. This, I am induced to infer beforehand—since it appears that immediately after the first rush of the principal shoals the number of nets at all the fisheries was reduced by nearly one half. I shall, however, at once communicate with these gentlemen, in anticipation of the fuller enquiry which I shall be able to make shortly on the spot.

That the most palpable exaggerations and misstatements, from whatever cause arising, have been indulged in, in the public prints, throughout the summer, I am well aware. For instance, one nameless correspondent accused a certain fishing company (of course also nameless) with even pursuing the fish to their spawning grounds, and molesting them there. That such vague and unauthentic statements obtain at least partial credit elsewhere, I am not unaware, for I notice that extracts repeating them have appeared in at least one Canadian paper. In reply to the particular charge in question, I may state that last spring Messrs. Ewen and Wise, of New Westminster (for I know these gentlemen to be the parties referred to) last spring, in anticipation of only an ordinary run of fish, established an out station some forty miles above the town, with the view of obtaining, from a wider area, a sufficiency of fish to meet their requirements. The fishery thus re-established by them was originally established by the Hudson's Bay Company in 1847, and was long occupied by them. It is situated in the full flow of the navigable waters of the Fraser; and, so far from interfering with the reproductive functions of the salmon, is distant several hundred miles from the nearest spawning grounds of the summer shoals, and at least five hundred miles from the most remote. I cite this case to show not only the general ignorance of the subject that prevails among the class who thus obtrude their opinions, but the reckless way in which charges, the most serious, are by them daringly advanced.

4. It has long been the practice, among the fishermen of the Lower Fraser, to pack the bellies of a portion of the salmon caught separately from the backs, the choicer packs being sold at a greater enhanced rate to epicurean purchasers, the inferior at a low price to less dainty or poorer applicants. Whether, under the exceptional circumstances of the present year, parties having unexpectedly secured at the outset an overplus of fish (as in the alleged case of Messrs. Finlayson & Lane), have been tempted to secure only the primer parts, from inability to preserve the whole, or not. I shall enquire minutely into the subject, and report. Meanwhile, I will state my opinion that the practice, under the first and most favorable view, is for many reasons objectionable; but whether, under that view, it could be legally introduced, is open to question. I ask to be instructed on this point.

5. With regard to the future protection of the salmon fisheries, while asking attention to my remarks in previous communications on peculiar natural conditions of the Pacific fish, I shall, after full enquiry on my return shortly to the sea coast report fully on the subject. I shall, at the same time, be able to report the result of minute enquiries, bearing directly on the subject, which I have been enabled to make during the present summer in the immediate neighbourhood of some of the principal, spawning grounds. These enquiries I am still engaged in, and shall continue to prosecute, as occasion offers, on my way downwards. The result will, I trust, enable

me to speak with increased confidence on a subject involving divers important considerations, the key to which is not readily obtainable.

So far as the supply of fish in the upper waters, for breeding purposes, during the present year is concerned, I am happy to say it is enormous. The shoals, when I left the waters of the Thompson some weeks ago, were crowding to the breeding places; and since then I learn that fresh shoals (of a different variety) have arrived in equal abundance. With regard to the facilities for a breeding establishment (should such be hereafter judged expedient) I have also made observation in anticipation of future need.

In conclusion, I beg to repeat that, on my way down the Fraser, and at New Westminster, minute enquiry into the alleged abuses which form the subject of your letter will be made, and every precaution authorized by the *Fisheries Act* taken, in furtherance of measures already taken, to prevent the repetition of any abuse that may be found possibly to have arisen.

I have the honour to be, Sir,
Your most obedient servant,

ALEX. C. ANDERSON,
Inspector of Fisheries.

C.

In reply to queries put to Antoine Gregoire, Interpreter, of Kamloops and Adam's Lake, B. C., by Alex. C. Anderson, Inspector of Fisheries, Gregoire deposed as under :

1. With regard to the alleged destruction of salmon fry, by the Indians, in parts within his knowledge?

Positively that it does not take place. That the great spawning ground, *i.e.*, of the first and principal shoals which ascend the South Thompson, is near the embouchure of the Adam's Lake, above the highest fishery. That early in the year, from the end of April to the middle of May, the waters (in the shallows) are usually alive with the young fish. That the Indians—who in any case could have no object in catching them for food, having copious resources in their trout and other fisheries—abstain from molesting them on higher grounds. They know, and say, that if the young fish are destroyed, the shoals returning from the sea will be proportionately diminished. That the Indians with this fact in view, are careful not to destroy, wantonly or wastefully, the mature fish, or to impede their passage to the spawning beds. That the barriers they construct in rivers are only to retard the passage of the fish, to enable the Indians to obtain their necessary winter supply, and that these temporary obstructions are thrown open, as necessary, to give passage to the ascending fish.

2. As to the assertion made some years ago that the Indians destroy the spawn in the beds, by gathering it for food?

That the allegation is altogether unfounded. That even if it were practicable (which to any extent is very questionable) the Chiefs would not permit it, for reasons before stated. The roes of the fish caught and cured for consumption, are, of course, preserved, and form an item of the usual diet of the Indians.

3. As to whether he has ever heard of either of these practices being followed elsewhere, outside of his personal knowledge?

Never. Thinks that the whole statement is imaginary. That his experience (while more specially applicable to the vicinity of Thompson's River and Adam's Lake), extends also to the Upper Fraser, and he speaks with equal confidence with regard to those parts.

Antoine requests Mr. Anderson to add that, so careful of the salmon are the Chiefs, they will not permit the Indians to use the pole to propel canoes in passing over the spawning shoals, after the spawn is deposited, but the paddle only. Also,

that in the spring, when the children sometimes seek to amuse themselves by making mimic weirs to entrap the young fish, they are at once made to desist by their parents. In brief, he says that he believes firmly that the Indians act most prudently with regard to the salmon, and do all in their power to protect them.

his
ANTOINE X GRÉGOIRE.
mark.

Antoine Grégoire made these statements before me at }
Head of Okanâgan Lake, B.C., 24th September, }
1877, and I believe him to be a competent and }
trustworthy witness.

(Signed) GILBERT MALCOLM SPROAT,
Joint Commissioner Indian Land Commission.

ALEX. C. ANDERSON,
Inspector of Fisheries, B.C.

D.

CAMP,
GREAT OKANAGAN LAKE, B.C.,
12th September, 1877.

The Honorable the Minister
of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to acknowledge receipt of enclosures relating to the construction of a fishing weir at a point on Fraser River, some miles below New Westminster.

I enclose copies of correspondence on this subject, to which I respectfully refer you.

At a conference which I held with the principal fishery proprietors at New Westminster, in the middle of June, no complaint of this structure, then in progress, was made to me; and I myself saw no objection to the construction of the weir, provided it did not interfere with the navigation, or otherwise violate the general provisions of the Fishery Law. Similar weirs were for a time exclusively, and are even now, I believe, partially employed upon the Columbia River. But they were gradually abandoned, as inefficient, in favor of the drift-net, than which, indeed, they are far less destructive.

On the whole, I am of opinion that much causeless jealousy of this weir, built by a man of small means, who probably could not afford the purchase of nets, has been exhibited. On the other hand, if, as Mr. Cooper states, the existence of the weir is calculated to cause impediment to the navigation at some future time, its continuance would of course become illegal. Indeed, the general Fishery Law itself provides for the removal of the stakes at the end of the season.

On my return to New Westminster I shall enquire particularly into all matters connected with the subject in question and report to you afterwards. Meanwhile, I am happy to say that the enormous shoals of fish that have passed up during the last two months, will at least have removed whatever apprehensions the Fishery proprietors may have entertained.

I have the honor to be, Sir,
Your most obedient servant,

ALEX. C. ANDERSON,
Inspector of Fisheries, B.C.

KAMLOOPS, B.C., 7th July, 1877.

Messrs. FINLAYSON & LANE
and HENRY HOLBROOK, Esq.,
New Westminster, B.C.

GENTLEMEN,—I received yesterday only your telegram of 28th ult., announcing that parties (not named) were placing heavy pile traps in the river, obstructing navigation, and that you protest. Of course any such proceeding is illegal, and, on complaint before a Magistrate, under the general and comprehensive terms of the Fishery Act, would be interdicted.

Before leaving Victoria I received an application from a Mr. Ibbotson, concerning a fish-trap; I enclose a copy of my answer, and you will see that I guard specially against any interruption of the navigation, or violation of the observances usual on the Lower Fraser with regard to the salmon fishery.

I have the honour, &c., &c.,

(Signed,) ALEX. C. ANDERSON,
Inspector of Fisheries, B.C.

P.S.—With reference to the general subject, I trust that the gentlemen engaged in the fishery (as suggested by me when in New Westminster) will meet and draw out some rules or by-laws for the conduct of the fishery, as their experience may teach. These, if sent to me, I would forward officially to Ottawa for approval or confirmation. At the same time, I could recommend the appointment of a Warden or Overseer to watch that the rules were carried out.

A. C. A.

(Copy of Telegram.)

A. C. ANDERSON,
Kamloops.

Parties are placing heavy pile-traps in the river, obstructing navigation. We protest.

FINLAYSON & LANE.
H. HOLBROOK.

NEW WESTMINSTER, B.C., 10th July, 1877.

A. C. ANDERSON.

DEAR SIR,—Colonel Lane and myself telegraphed to you about the traps being erected and placed in the river. * It catches both large and small, and we think the erection is contrary to law; but if such is not the case, we shall have to put them up and allow no fish to pass up for the Indians. Several cargoes of stone are being brought from Nanaimo to weight it—it is the heart trap.



We would like to hear your decision in the matter. There are 70 lots fishing with nets, and we all want fair play and to start even. There is trouble for want of fishing regulations to-day at the mouth of the rivers, which will be a case for the magistrates, as knives and pistols—so report says—have been drawn.

Yours, &c.,

(Signed) H. HOLBROOK.

* N.B.—As may be gathered from my Reports, &c., this statement, doubtless correct in itself, implies a fallacy.

A. C. A.

(Copy)

KAMLOOPS, B.C., 20th July, 1877.

The Hon. HENRY HOLBROOK,
 &c., &c., &c.,
 New Westminster.

DEAR SIR,—I have received your letter of the 10th inst., having reference to the joint telegram of yourself and Messrs. Finlayson & Lane, to which I had already replied on the 7th inst.

By the copy then sent of my note to Mr. Ibbotson (whom, though not named by you, I assume to be the offending party), you will perceive that I specially guard against any interruption of the navigation, or action in any way violating the rules generally observed in the conduct of the salmon fishery on the Lower Fraser.

Under the showing made by you I am decidedly of opinion that the trap in question violates the conditions named, and must hereafter be interdicted. Whether, however, the offenders may not have acted under an erroneous view; and whether, under the circumstances, it might be well to condone the error for the present season only, with the full understanding that the trap be removed in the autumn, I leave to you to state to me.

I will write to the Commissioner of Fisheries on the subject, and at the same time suggest to him the expediency of appointing a resident Warden at New Westminster, and also (though less urgently required) at certain other points.

I repeat to you my request that you, and others connected with the Fisheries, would meet as soon as convenient and make such suggestions with regard to the future regulation of the Fisheries as might seem expedient.

These, with my remarks, I would forward for the consideration and sanction of the Minister; and in this way much future trouble and uncertainty would be obviated.

I have the honour to be, Sir,
 Your most obedient servant,

(Signed) ALEX. C. ANDERSON,
Inspector of Fisheries, B.C.

(Copy of letter referred to.)

VICTORIA, B.C.,
 26th May, 1877,

Mr. JOHN IBBOTSON,
 New Westminster, B.C.

SIR,—With reference to your letter of the 22nd instant, I lose no time in informing you that I can see no objection to your constructing a fish-trap in the position mentioned by you, provided it do not interfere with the navigation of the river, or otherwise violate the usual observances of the salmon fishery.

I have the honour to be, Sir,
 Your most obedient servant,

(Signed) ALEX. C. ANDERSON,
Inspector of Fisheries, B.C.

DEPARTMENT OF MARINE AND FISHERIES,
 BRITISH COLUMBIA AGENCY.

VICTORIA, 17th July, 1877.

Hon. A. SMITH,
 Deputy Minister of Marine and Fisheries.

SIR,—I have the honour to forward the enclosed communication for the information of the Department, upon receipt of which I thought it necessary to visit New Westminster, and inspect the structure complained of particularly, as it will be seen by Messrs. Holbrook & Lane's notes, that it was represented as a probable obstruction to navigation.

Mr. A. C. Anderson, Inspector of Fisheries, had, I found, given the proprietor authority in writing to construct the fish trap which extends about 300 feet more or less at right angles from the left bank of the river, five miles below New Westminster. It is, however, upon a sand bar, and does not in any way impede navigation at present; but the probabilities are that the number of piles driven will have a tendency to increase the bar, and shoal the water in that locality.

In conversation with the proprietors of other canneries, I ascertained that they considered it an illegal, method of catching fish; but, if in the absence of any law governing such matters in the Province this system was sanctioned, they would all adopt this course if the traps in question proved a success.

I have the honour to be, Sir,
Your most obedient servant,

JAMES COOPER,
Agent, Dept. Marine and Fisheries, B.C..

NEW WESTMINSTER, 9th July, 1877.

Captain COOPER.

DEAR SIR,—Will you lend me a copy of the Canadian Fishery Laws.

Parties are building a large trap of piles and sunk with stone in the river for the purpose of catching salmon. It will probably be an obstruction to navigation, and, I think, against the laws. Please let me know what the laws are, or send me a copy, and oblige

Yours truly,
C. C. LANE.

Holbrook and self telegraph a protest to Mr. Anderson.

NEW WESTMINSTER, 10th July, 1877.

Captain COOPER.

DEAR SIR,—One of the Fisheries is putting up a large salmon trap. Messrs. Lane and the others object, as we think it is against the law, and will be an impediment to navigation, for, if allowed to remain, we all shall have to do the same.

A number of piles are driven into the river; the trap is a large affair, built of wood, and filled with stone and sunk. I hear some vessels are about to bring the stone over from Nanaimo.



It catches the fish both large and small.

We can only appeal to you to see if it stops navigation. You ought to have full power, as Mr. Anderson is away. We telegraphed to him, but no notice has been taken.

There was trouble at the mouth of the river yesterday. I suppose it will come before the magistrates.

Yours truly,

H. HOLBROOK.

VICTORIA, B. C., 7th January, 1878.

The Honorable

The Minister of Marine and Fisheries,
Ottawa.

SIR,—I reached this place on my return from the interior of the mainland just before Christmas, and have since obtained, from various sources, returns of the yield of the principal fisheries in this Province. The total return, however, is still incomplete; but I hope to be able, in a few days, to collect the additional information required, while completing my report for the past year. The whole I will forward with the least possible delay, and in time, I trust, to reach Ottawa before the opening of the Session.

While at New Westminister, on my way down, I had a meeting with most of the fishery owners of that vicinity, at which various matters connected with the past and future of the fisheries were discussed. Among the rest, the subject of a breeding establishment was introduced.

The objects to be attained by the formation of such an establishment are twofold:—

1. To secure a regular supply of salmon year after year, to supplement the present natural supply, which, though periodically most abundant, (as witness the past season) is partially intermittent, through causes depending apparently on the peculiar habits of the salmon of these waters.

2. To introduce into the waters of the Fraser the large salmon of the Columbia River (*S. Quinnatt*)—a most valuable fish, the introduction of which would largely enhance the prospective value of our fisheries.

In this matter I suggested to the meeting that, in order to approach the Government effectively, and to elicit the most speedy action, it would be expedient to submit to them some definite proposal, in guarantee of their own earnestness.

Thereupon a series of resolutions were proposed and carried, a memorandum of which, by request of the meeting, I now respectfully submit herewith.

You will perceive that the fishery owners themselves propose, with this definite object in view, to raise a fund to yield annually, as computed, some \$7,500 in aid of primary outlay and the continuous expense of the Department for the protection and regulation of the fishing interests in this Province.

The amount of boat license proposed may probably be considered by you excessive; and it is for you to judge whether or not it should be somewhat reduced—or indeed, whether in this or some other mode the necessary contribution should be raised in aid of future outlay. I may, however, add that the form and amounts suggested in the memorandum were unanimously approved by those present, and would therefore, it is to be presumed, be generally acceptable.

In respectfully submitting the proposition made, I express my earnest hope that its tenor will obtain your favourable consideration.

With regard generally to the result of the fishery of the past year, though the returns are not yet complete, I may state that it will probably exceed half a million dollars, of exported fish alone, exclusively of the large amount absorbed by home consumption.

I forward the proposition now made, in anticipation of my general report, in order that it may be before you during the preparation of the annual estimates.

I have the honour to be, Sir,
Your most obedient servant,

ALEX. C. ANDERSON,
Inspector of Fisheries, B. C.

MEMORANDUM.

At a general meeting held at the Colonial Hotel, New Westminster, B.C., on the 17th December, 1877, Mr. Anderson, Inspector of Fisheries, being in the chair, and the following gentlemen connected with the fishing interests on the Lower Fraser, being present, viz.:—Messrs. Holbrook, English, Herring, Ewen, Wise, Birrell (the last representing the firm of Finlayson & Lane); Mr. Birrell acting as secretary, the following resolutions were carried:—

Mr. English proposed that the Dominion Government should be asked to make an appropriation for the establishment of a breeding establishment for the regulation of the supply of salmon, at a suitable point on Fraser River, the cost of which it is estimated would be about \$20,000. In aid of this object, and to provide a fund for the subsequent expenses, it is proposed that a license of twenty dollars on every boat employed in the fishery shall be paid in advance, and also a tax or duty of eight cents per case of four dozen one-pound cans of preserved salmon, and of twenty-five cents per barrel of salted salmon packed at any cannery or curing establishment on Fraser River. Mr. English's proposition, which was unanimously concurred in, would, based on the production of the past season, yield a revenue of about \$7,500; and it is probable would, with the extension of the industry, exceed that limit.

Mr. McEwen suggested that, as a preliminary measure, a competent person versed in the subject of fish-breeding should be sent from Canada to examine and select a suitable position for the erection of the proposed establishment.

The meeting is of opinion that the general Dominion Fishery Act is quite inapplicable, as a whole, to this portion of the Dominion, bearing in view the different habits and nature of the salmon frequenting these waters.

Mr. Wise drew the attention of the Inspector to the necessity of enforcing that portion of the Act which prohibits the emptying of sawdust into the rivers.

It was also unanimously agreed that the Dominion Government be respectfully requested to appoint the steamer "Sir James Douglas," or other efficient vessel, to remove the snags at those points where they impede the drifts, from the mouth of the river upwards, as far as St. Mary's Mission.

NEW WESTMINSTER, B.C., 17th December, 1877.

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VICTORIA, B.C., 3rd January, 1878.

Hon. A. SMITH,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to acknowledge the receipt of your enclosure of 13th November last, containing copy of Mr. Meredith's letter to you with reference to the Indian fisheries in this Province, with extract appended from a communication on the subject from Dr. Powell, the Indian Superintendent at Victoria.

I have, from the first, been alive to the necessity of affording every protection to the interests of the natives in this important particular, and I have carefully watched, in as far as practicable, that no infringement of these hereditary rights should be permitted. The exercise of these rights, unfettered by wanton or ignorant interference, is to many of the tribes an object of prime importance; and as a matter of expediency alone, omitting entirely the higher consideration of the moral claim, their protection demands the earnest care of the Government. It was with a view to this that I have, on several occasions, in addressing your Department, pointed out the economical and satisfactory nature of the native modes of fishing—fearful lest, under representation of others less fully cognizant of the subject, the Department might be led to take a different and erroneous view.

I had already intended, before the receipt of your communication, to make the following suggestion for legislation during the approaching Session, viz.:—

That, as a rule, the provisions of the Fishery Act, as modified to suit the exigencies of this Province, shall not be deemed to apply to the Indians, working to supply their own wants in their accustomed way.

This provision, which I earnestly recommend, is in conformity with the suggestion made by me to the Department under date 12th June, 1876, of which copy is appended. It corresponds, too, with a special provision which the United States authorities have found it necessary to introduce in a recent Bill for the regulation of the Fisheries on the Columbia River.

I am preparing and shall shortly submit a draft of certain rules for consideration and adoption, in which the suggestion above made will be embodied.

In conclusion, I may state, that, under the appointment which I temporarily hold for, the settlement of the Indian question in this Province I have had, and shall continue to have, specially favourable opportunities of noting the native wants in various localities. In all cases, so far, their interests, as fishermen, have received my best attention; and I shall continue to urge my brother Commissioners—whose views on this subject, I may add, do not differ from my own—the necessity of securing the hereditary privileges of the Indians whenever they may appear to be imperilled. This, I do not question, we can successfully do, while, at the same time, avoiding injurious interference with the important industry now actively advancing, and in the benefits of which the Indians of the sea-board are themselves large participants.

I have the honour to be, Sir,
Your obedient servant,

ALEX. C. ANDERSON,
Inspector of Fisheries, B. C.

OTTAWA, 23rd October, 1877.

Hon. A. SMITH,
Minister of Marine and Fisheries,
Ottawa.

SIR—I have the honour, by the direction of the Minister of the Interior, to transmit for the consideration of the Minister of Marine and Fisheries, a copy of an extract of a letter received from Dr. Powell, the Indian Superintendent of Victoria, calling attention to the movement in British Columbia towards the establishment of salmon canneries in various parts of the coast in that Province, and urging the necessity of adopting stringent regulations to prevent the destruction of spawning grounds, and to ensure the Indians the possession of the fishing grounds heretofore used by them.

The Minister desires me to say that, in view of the critical relations between the Government of the Dominion and the Indians of British Columbia, he thinks the matter referred to by the Indian Superintendent one of considerable importance, and he trusts that arrangements will be made to protect the Indians in the possession of any fishing stations which they have heretofore enjoyed.

I have the honour to be, Sir,
Your obedient servant,

(Signed) E. A. MEREDITH,
Deputy of the Minister of the Interior.

"The great impetus given to the establishment of salmon canneries this season excites much talk among the Indians of white people monopolizing their favourite fishing grounds.

"Quite a number of canneries will be built this year on various parts of the coast, and stringent regulations to prevent the destruction of spawning grounds, and to provide for the proper protection of Indians in the possession of certain fish-

ing places—considering themselves as they do, the sole owners of all such localities—should be made.

"I am told that this year, on the Fraser, the cannery firms not satisfied with the extraordinary and almost unprecedented run of fish, have followed them up to the lakes and brought them down by steamer.

"I think much care ought at once to be exercised by the Fishery Department in preventing such untoward acts in the future, and I am of opinion that our Department should take steps, as soon as possible, to reserve certain fishing grounds for the Indians, who will be sure to create trouble if not thus cared for."

No. 18.

RETURN showing Number and Value of Vessel*, Boats, Nets, &c., in the Province of British Columbia, for the Year 1877.

NAME OF PLACE	NAME OF FITTER OUT	NETS AND SEINES.										
		VESSELS.	FISHING BOATS.	FLAT BOATS.	No. of Fishermen.	No. of Shorermen.	Salmon Seines.	Herring Seines.	Yards.	No.	Value.	
New Westminster, Fraser River...	Ewen & Wise.....	13	650	2	50	95	38	9120	4000	44	\$	
do	Finlayson & Lane.....	25	1200	2	600	68	150	44	4400	4500	44	\$
do	Holbrook & Co.....	1	150	10	350	50	97	38	1520	3800	1	400
do	English & Co.....	26	1040	2	900	90	250	105	21000	16800	3	325
do	J. S. Deas.....	20	900	2	200	64	150	60	8000	6000	1	400
Near mouth of Fraser River.....	North-Western Commercial Company.....	1	10	120	2	200	9	400	22	3	25	200
Uverness, Skeena River.....	Various fishermen.....			50,5000	100	100	100	100	100	100	100	100
Estimated along the coast.....												
Total	370	620	137	9140	21	1350	444	745	310	46040	37600	14350

RETURN showing the Kinds, Quantities, and Value of Fish, &c.—British Columbia—Continued.

NAME OF STATION.	NAME OF OWNER.		Oils,	Oil-a-ham Oil, galls	WHERE MARKETED.
			Dog-bush, Seal Oil, Porpoise galls.	No. of Seal-skins.	No. of Seals.
New Westminster, Fraser River....	Ewen & Wise.....	1650	400032	.....	Australia, South America and Great Britain.
do	do	916	574368	.....	England, Australia and (Canada?)
do	Finlayson & Lane....	290	432000	.....	London and Australia.
do	Hobrook & Co....	200	112000	.....	do
do	English & Co....	395	532176	.....	do
Near mouth of Fraser River....	J. S. Deas.....	Northwestern Com- mercial Company....	10	144000	do
Inverness, Skeena River....	Mr. Ingwell and others.....	100	600	100 50	do
In Victoria and Esquimalt.....	.....	.....	.....	1200	Home market.
Vancouver & Queen Charlotte Is'ds.....	.....	.....	.....	5700 5700	.....
Estimate of Home Consumption of various kinds, and including Cus- toms return of export of fish oil....	Divers sources.....	.....	32000	.....	115495 10000
Total.....	.....	3561	3234576	600	32000 100 50 263 1200 1000 5700 5700 115495 10000

ALEX. C. ANDERSON,
Inspector of Fisheries, B.C.

VICTORIA, B.C., 27th January; 1878.

RECAPITULATION.

YIELD and Value of the different Fisheries in the Province of British Columbia, during the Year¹ 1877.

Kinds of Fish.	Quantity.	Price.	Value.
		\$ cts.	\$ cts.
Salmon, Pickled.....	3,561 brls.....	8 00	28,488 00
do Preserved, in cans.....	3,234,575 lbs.....	0 13½	436,667 76
do Smoked, Value.....			600 00
Herrings, Pickled.....	263 brls.....	8 00	2,104 00
do Smoked, Value			1,200 00
Haddock do do			100 00
Sturgeon, Preserved, in cans.....	1,000 lbs.....	0 12½	125 00
Mixed Fish, other than Salmon.....	50 brls.....	6 00	300 00
Seal-skins.....	5,700 pieces.....	4 50	25,650 00
Dog-fish, Seal and Porpoise Oil.....	115,495 gallons.....	0 40	46,198 00
Cola-han Oil	10,000 do	1 00	10,000 00
Fresh Fish, sold on markets..... Value			30,000 00
Fish, Cured, for home consumption. do			2,000 00
Total Value of the Products of the Fisheries in 1877.....			583,432 76
do do do 1876.....			104,697 00
Increase.....			478,735 76

Quantity and Value of Fish Exported from British Columbia in the year 1877, as per Customs Return.

Salmon, pickled.....	2,492 brls.....	\$ 18,673 00
do preserved in cans..	3,170,512 lbs.....	389,240 00
Herrings, pickled	516 brls.....	2,064 00
Seal Skins.....	5,700 pieces.....	25,650 00
Fish Oil.....	65,495 gallons.....	20,973 00
Total Value Exported		\$456,600 00

No. 19.

REPORT ON THE FISHERIES OF MANITOBA, FOR THE YEAR 1877.

LITTLE BRITAIN, LISGAR COUNTY,
PROVINCE OF MANITOBA, 25th January, 1878.

To the Honorable

The Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to forward herewith, in tabular form, the estimated number and value of the fish taken during the year 1877, in the waters of this Province, and in parts of Lakes Winnipeg and Manitoba, adjacent thereto.

You will observe that the take of whitefish at each of the stations has been greater than last year, making in the aggregate an increase of thirty-eight thousand, and the price rose from five to eight dollars per hundred at all the stations. We may attribute the increase to two causes:—

1st. To the increased number of fishermen who resorted to the various stations near the mouth of the River Winnipeg.

2nd. The calm weather that continued during the spawning season, which commenced about the tenth of October, and ended about the beginning of November. Great numbers of the fish are consumed by the parties who take them; but many thousand are taken into the settlement, especially to Winnipeg.

Sturgeon.

The catch of this excellent fish has been greater than during the previous year, but this fish does not frequent the waters of Red River in such numbers as in former times, and although still in undiminished numbers in the Lake, there has been no systematic effort to take them, yet, I know that soured sturgeon is nothing inferior to soured trout or salmon.

The paucity of the number of pike is accounted for by the fact, that the principal angling places near the mouth of the river were within the limits of the Quarantine, and from the fact that those who were wont to live on that kind of fish were last winter in possession of more or less grain and potatoes.

Catfish.

The number of this kind of fish taken this year falls short of the number taken during the previous season, which may in some degree be owing to the great rise of water in our rivers, and the great quantity of grass and dead leaves floating on the water and getting on the lines and hooks, often breaking the former and clogging the hooks which prevents the fish taking the bait; besides many of the people were in possession of enough food without fishing.

The decrease in the take of gold eyes may be ascribed to the same causes. The great decrease in perch, bass and suckers, may, to some extent, be due to the little value (that those who have any other kind of food) set on these fish. For some years past bass have been very few in the Red and Assiniboine Rivers.

We have no fishways; neither has any portion of the "Fisheries Act" been extended, to my knowledge, to this Province, consequently we have no close season. Here I beg to observe that catfish ought to be protected during the spawning season. The sturgeon enter the river immediately after the ice clears out of the river and commence operations, which last to the beginning or middle of June, afterwards returning to the Lake. In former times sturgeon re-entered the river whenever the wind blew freshly from the north or north west, most probably in quest of food; but very few appeared during the last few years.

If spared and in health, I intend to visit the Icelandic settlement on Lake Winnipeg next week, and will forward to your Department the information that I may be able to gather there, and which if it amounts to anything may be published as a supplement to this report, or otherwise as you may deem best.

I have the honour to be, Sir
Your obedient servant,

D. GUNN, SEN..
Fishery Overseer for the Province of Manitoba.

LITTLE BRITAIN, 9th February, 1878.

To the Honorable
The Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to inform you that in conformity with the intention expressed in my last communication, I visited the Icelandic Settlement on the west shore of Lake Winnipeg, where I made some enquiries respecting their fishing operations and the success that crowned their efforts. The result of these enquiries gave me to understand that the fish taken during the summer months consisted of the following kinds: Catfish, gold eyes, pike, perch, sunfish and suckers, with a chance sturgeon. I further learned that on some occasions they use long seines with various success, viz.: In one sweep of the seine they took seven fish, in another 700. The meshes of these seines are three inches. The west side of the Lake being soft mud, sand or gravel, with few, if any, boulders on the bottom, is very unfavorable for summer operations. It is a fact well known to fishermen in Keewatin that during the hot weather in the summer the fish keep in deep water and never approach the shore until the waters become cool, and the Icelanders have no boats nor any kind of craft in which any man of sane mind would like to venture a couple of miles from the shore; as their raft-like skiffs, with their low sides and square sterns, forepart, are ill adapted to resist the stormy winds that sweep over the great lake and raise its waters into mountain waves. From what I saw of their nets I feel justified in saying that they have been ill made; so much so, that one half the meshes were running and under the proper size for whitefish.

From all that I could learn, the take of whitefish in the spawning season was not much more than was required to supply the people's daily wants, and consequently nothing of importance had been laid up for winter, but as soon as the ice on the Lake had become sufficiently strong, many of the men left their homes in quest of fish; some of them provided themselves with tents, or some substitutes for the same, stoves, fuel, food and their nets; those travelled to the east, set their nets, protected their tents and passed the nights on the Lake, but after pitching about for some time and trying their nets in several places, they returned unsuccessful. Others went north, and after travelling from fifty to sixty miles set their nets and caught a considerable number of fish of the best quality; for instance, one took 300 whitefish, another had six nets and caught 900; others, according to their means, were equally successful. But towards the latter end of January and during the month of February the fish seem to become dormant and do not regain their activity until the snow waters get under the ice, when fish have ever been taken in great numbers at that season, and we trust success may attend our Icelandic friends in March and April, for I believe their industry deserves success. My visit would have been of longer duration and my enquiries more extensive, had I not been informed at Gimli that your Department had applied to a gentleman there for the statistical account of the fisheries on the west shore of the Lake.

I have the honour to be, Sir,
Your obedient servant,

D. GUNN, Sen..
Fishery Overseer for the Province of Manitoba.

No. 20.

RETURN of the Number and Value of Vessels, Boats, Nets, &c., together with the Yield and Value of Fish in the Province of Manitoba, for the Year 1877.

VESSELS AND BOATS EMPLOYED FISHING.	STATION.	NETS, THEIR NUMBER, SIZE, VALUE, &c.						KINDS AND QUANTITIES OF FISH.						TOTAL VALUE.					
		Vessels.	Boats.	Gold Eye Nets.	Whitefish Nets.	Rods.	No.	Men.	Value.	Gold Eyes, No.	Whitesh., lbs.	Sturgeon, No.	TROUT, barrels.	Catfish and Suckers, No.	Pike, No.	Pikebel, barrels.	Oarse Fish, No.		
LAKE MANITOBA.																\$ cts.			
<i>West Side.</i>																			
Sandy Bay	15	150	20	.....	95	898	332	.....	10000	.....	.....	.....	200	.....	500	835 00	
Big Point.....	5	50	5	.....	15	142	52	.....	1200	.....	.....	.....	300	.....	600	141 00	
<i>East Side.</i>																			
Oak Point	8	80	9	30	60	30	80	640	280	7420	8000	450	1000	826 10	
St. Laurent	19	190	20	40	80	40	93	744	325	12000	10000	1000	1500	1285 00	
Lake Winnipeg	110	880	150	80	160	80	750	7091	2625	80000	520 3500	25000	2500	15375 00	
Assinibone and Red Rivers	90	720	100	120	240	120	250	1500	500	1200	150 20000	20000	1300	5000	5561 00
Total	247	2070	304	270	540	270	1283	11015	4114	111820	670 7300	45000	5750	19600	24023 10

RECAPITULATION

Of the Yield and Value of the different Fisheries in the Province of Manitoba, during the Year 1877.

Kinds of Fish.	Quantities.	Prices.	Value.		
				\$	cts.
Whitefish	111,820 pieces				
Sturgeon	670 do			0 08	8,945 60
Gold Eyes	73,000 do			5 00	3,350 00
Catfish and Suckers	45,000 do			0 02	1,460 00
Pike	5,750 do			0 20	9,000 00
Coarse Fish	19,600 do			0 05	980 00
Total Value of the Products of the Fisheries in	1877				
do	1876				
Decrease					

APPENDIX No. I.

SCHEDULE of Fishery Officers in the Provinces of Ontario, Quebec, Nova Scotia, New Brunswick, Prince Edward Island, British Columbia, and Manitoba, appointed under the Fisheries Act [1868], with Districts, Post Office Address, Salary, &c., &c., distinguishing those who, being Fishery Overseers, are instructed to act *ex officio* as Magistrates, from those who act in the capacity of Fishery Wardens, and do not exercise magisterial powers.

PROVINCE OF ONTARIO.

Name.	District.	Address.	Overseer or Warden.	Salary.
Samuel Wilmot.....		Newcastle	Officer in charge of fish-breeding establishments at Newcastle and Sandwich.	\$ ets. 2,000 00
Henry Hunt.....	Larne's Island	Rockport	Warden ...	20 00
John Wallace	Lindoe Island	Lansdowne	do ...	50 00
J. D. McMillan.....	Lake St. Francis, from Cornwall to Coteau du Lac, and from St. Regis to Ste. Cecile	Dundee, P.Q.	Overseer... do ...	50 00 200 00
John Mooney.....	Brockville to Cornwall.....	Prescott.....	do ...	
Peter Kiel.....	Wolfe and Amherst Islands, and waters around down to Brockville..	Wolfe Island	do ...	200 00
David Conger.....	Carrying Place to Point Peter	Wellington.....	do ...	100 00
Peter Huff, jun	West Point to Point Peter	Pictou.....	do ...	50 00
Wm. A. Palen	Point Peter to Petticoat Point.....	Point Peter, Cherry Valley	do ...	50 00
John G. Hicks.....	Petticoat Point to Black River	South Bay	do ...	100 00
Wm. Plews.....	Black River to Bongard's Wharf	Prinyer	do ...	100 00
Charles Gilchrist.....	Rice Lake and part of Lake Ontario fronting on the County of Northumberland	Port Hope	do ...	400 00
Jos. L. Thompson..	Cole's Ferry to Prescott	Brockville.....	Warden ...	50 00
Hugh Thompson...	Westerly limit, County South Leeds to Cole's Ferry, and Islands opposite in St. Lawrence River, including Howe Island	Gananoque.....	Overseer...	50 00
David Hamilton....	Charleston Lake, Gananoque Lake and River.....	Charleston Lake, P.O.	Warden ...	50 00
A. J. Harrington..	Lake Scugog (west side).....	Port Perry.....	Overseer...	50 00
John McAllister....	do (east side)	Cæsarea.....	Warden ...	50 00
Alfred Knight	Lake shore and inland waters, Counties of Lennox and Addington	Petworth	Overseer...	200 00
Charles Wilkins ...	Waters of the Bay of Quinte fronting on County of Hastings, and from Carrying Place eastward to Mill Point in the Co. of Prince Edward..	Belleville	do ...	200 00
	Carried forward			3,970 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—*Continued.*PROVINCE OF ONTARIO.—*Continued.*

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward.....			\$ cts. 3,970 00
John W. Kerr.....	Whitby Harbor to Port Maitland	Hamilton.....	Overseer..	500 00
James G. Wilcox.....	River Credit	Port Credit.....	do ...	50 00
Chas. L. Bingham.....	That part of the Counties of Norfolk and Haldimand fronting on Lake Erie	Pleasant Hill.....	do ...	200 00
Alex. McBride	That part of Lake Erie fronting on the County of Elgin	Port Burwell.....	do ...	50 00
John McMichael....	Lake Erie frontage, County of Kent.	Rond Eau.....	do ...	50 00
Andrew Hughson.....	River Credit, from Orangeville to Norval, together with the Townships of Mono, East Garapaxa, Albion, Amaranth, Luther and Caledon to Church's Mills Cataract	Orangeville.....	do ...	50 00
Peter McCann	From London to Thameville on the Thame River.....	London	do ...	150 00
E. Boismier.....	Baptiste Creek on Lake St. Clair, to Point Pélée	Sandwich.....	do ...	200 00
James Cummins....	Point Pélée Island.....	Kingsville	Warden ...	50 00
D. McMaster	By's Point, on River St. Clair, to Kettle Point, on Lake Huron.....	Sarnia	Overseer..	200 00
A. C. McKinnon	Kettle Point to Point Clarke, Lake Huron.....	Goderich	do ...	100 00
James Muir	Point Clarke to Cape Hurd, including adjacent islands	Port Elgin.....	do ...	100 00
Geo. S. Miller.....	Owen Sound to Cape Hurd.....	Owen Sound.....	do ...	100 00
James Patton.....	Collingwood to Point Rich	Collingwood.....	do ...	250 00
Samuel Fraser.....	Point Cockburn to Moose Point.....	Midland	do ...	100 00
Farquhar McRae.....	Sydenham River and Lake St. Clair, from Baptiste Creek to Baby's Point	Wallaceburg.....	do ...	150 00
Geo. B. Abrey.....	Manitoulin Islands and adjacent islands in Lake Huron.....	Little Current.....	do ...	100 00
Wm. McGown	From Moose Deer Point to Byng Inlet, Georgian Bay.....	Parry Sound.....	Warden	50 00
Alex. Proulx	Byng Inlet to Thessalon River.....	Killarney.....	do ...	50 00
Jos. Wilson	Thessalon River to head of Lake Superior	Sault Ste. Marie	Overseer..	100 00
James Dickson.....	Lake Superior, extending from Slate Island to mouth of Pigeon River.....	Prince Arthur's Land-ing	do ...	100 00
Alex. McKenzie	Lake Simcoe and tributaries.....	Barrie	do ...	50 00
Wm. R. Young.....	Lake Simcoe, from Cook's Bay to Beaverton.....	Keswick.....	do ...	50 00
George Cochrane	Inland waters, Co. Peterboro', including Pigeon, Deer, Salmon-Trout, Stony, Sturgeon and Che-mong Lakes.....	Lakefield.....	do ...	200 00
Daniel Bowen.....	Upper Division or East Riding, Co. Peterboro', comprising waters of Gull and Burnt Rivers and tributaries, together with Drag, Eagle, Moose, Redstone, Crooked and other lakes within such limits.....	Haliburton	do ...	100 00
James McFadden.....	Mississippi River and Lake	Carleton Place.....	do ...	30 00
Jno. Lyon	Madawaska River and Lake des Chats	Arnprior	do ...	50 00
Andrew Telfer.....	Bonnechère River and Lakes, Co. Renfrew	Sand Point.....	do ...	50 00
	Carried forward			7,200 00

SCHEDULE of Fishery Officers in the several Provinces, &c.—*Continued*

PROVINCE OF ONTARIO.—*Continued.*

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward.....			\$ cts. 7,200 00
James Sutherland..	Inland waters, N.R. County Victoria, north of Sturgeon Lake and above Fenelon Falls	Woodville	do ...	100 00
John McGregor....	Rideau Lakes.....	Westport	Warden ...	75 00
Henry Lawe	Grand River from mouth to Caledonia	Dunnville	Overseer...	100 00
Robert Watt	Grand River and tributaries from Brantford upwards.....	Brantford.....	do ...	100 00
Wm. E. Foot.....	Lakes Muskoka, Rosseau, Joseph, Lake of Bays and the Maganetawan River	Bracebridge	do ...	125 00
Wellington Hull	The Rivers Credit and Speed, with their tributaries, in the townships of Eramosa, Erin, Caledon and Esquessing	Erin.....	do ...	50 00
	Total			7,750 00

PROVINCE OF QUEBEC.

Napoléon Lavoie ..	Lower St. Lawrence River and Gulf..	Gaspé Basin (in summer), L'Islet (in winter).....	Officer in charge of Gov. st'm'r for protection of Fisheries..	1,400 00
C. Caron	Point Lévis to River Ouelle	L'Islet	Overseer...	200 00
Jules Gauvreau	River Ouelle to Point à la Loupe, Green Island.....	Isle Verte.....	do ...	100 00
H. Martin.....	Point à la Loupe, Green Island, to Rimouski River (same included)	Rimouski.....	do ...	100 00
L. E. Grondin	Rimouski to River Blanche	do	do ...	100 00
Vital Charest.....	River Blanche to Cape Chatte.....	Matane	do ...	100 00
George Gagnon.....	Inland waters, County Témiscouata.....	St. Epiphane.....	Warden ...	30 00
Cyrille Dubé.....	Lake Témiscouata and neighbouring waters, County Témiscouata.....	Notre Dame du Lac.....	do ...	30 00
Alfred Blais	Lake Matapedia and River Matapedia to Causapscal	Causapscal.....	do ...	100 00
J. J. Letourneau...	Cape Chatte to River St. Anne des Monts	St. Anne des Monts	do ...	100 00
P. Vibert, jun	York, Dartmouth and St. John Rivers, Gaspé Basin to Point Maquereau.....	Gaspé Basin	do ...	200 00
John Phelan.....	Point Maquereau to Paspebiac Point ..	Port Daniel.....	do ...	50 00
R. W. H. Dimock..	Paspebiac Point to Maguasha Point ..	New Richmond.....	do ...	200 00
John Mowat	That part of the County of Bonaventure extending from Maguasha Point upwards, and including the Rivers Matapedia and Restigouche and their tributaries.....	Dee Side, Matapedia...	do ...	300 00
Daniel Rosa	Lakes Beauport, St. Charles and ad- jacent Lakes.....	Quebec	Warden ...	50 00
L. P. Huot	Lakes Philippe, Gagné and adjacent Lakes, and the Island of Orleans....	St. Roch, Quebec.....	Overseer ..	100 00
	Carried forward			3,160 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—Continued.

PROVINCE OF QUEBEC.—Continued.

Name.	District.	Address.	Overseer or Warden.	Salary]
	Brought forward.....			\$ cts. 3,160 00
J. E. Demeule	River du Gouffre to Canard River, including inland Lakes adjacent to Murray Bay and St. Paul's Bay.....	Murray Bay.....	Warden ...	50 00
Etienne Tremblay.	Lakes in rear of Murray Bay and	{ Bay St. Paul.....	do ...	30 00
Jos. Simard	Bay St. Paul	{ St. Agnes.....	do ...	40 00
Antoine Filion		{ Bay St. Paul.....	do ...	30 00
F. Saillant.....	Waters in Counties of Chicoutimi and Saguenay.....	Tadousac.....	Overseer ..	150 00
Job Bilodeau.....	Lake St. John and tributaries, Upper Saguenay.....	Metabetchouan.....	Warden ...	50 00
Joseph Boily	Escoumains to Bersimis	Milles Vaches	do ...	50 00
G. L. Duguay.	North Shore, from Manicouagan to Point des Monts, including Beeschie, Mistassini and Godbout Rivers.....	Godbout	do ...	150 00
J. O. Belanger.	North Shore River St. Lawrence, from Point des Monts to Bay des Rochers, including Trinity and Pentecost Rivers.....	L'Islet.....	do ...	150 00
G. Mathurin.....	Moisie District, from Point Jambon to Point St. Charles, including Moisie River	Montmagny	Overseer ..	150 00
D. B. McGie	Esquimaux Point to Sheldrake River..	Port Daniel	do ...	100 00
P. C. Gobeil.....	Watsheeshoo District, from Ateepetel Bay West to Little Watsheeshoo River East.....	Natashquan.....	do ...	150 00
J. B. Couillard.....	Natashquan District, from River Nabisippi to Point Kegascha	Montmagny	Overseer ..	150 00
J. Legouvé	St. Augustine Division, from Cape Whittle to Checatica	Pacachoo	Warden ...	100 00
W. H. Whitley.....	Bonne Esperance Division, from Che- catica to Blanc Sablon	Bonne Espérance	do ...	100 00
J. J. Fox.....	Magdalen Islands	Amherst	Overseer ..	50 00
W. C. Willis.....	Waters in District of St. Francis	Sherbrooke	do ...	150 00
H. W. Austin	District of Montreal and Richelieu, together with Richelieu River and tributaries	Chambly	do ...	200 00
S. F. Copp	Lake Memphremagog, in the Coun- ties of Stanstead and Brome	Georgeville	do ...	100 00
J. B. Chevalier....	Richelieu River, from St. John to Lake Champlain	St. Jean, Iberville	do ...	100 00
Pierre Latraverse..	That part of the River St. Lawrence bordering on the Counties of Rich- elieu, Yamaska and Berthier, in the Province of Quebec, including Sorel and adjoining islands	Sorel	Warden ...	100 00
P. E. Luke	Mississquoi Bay in Lake Champlain and Pike River	Phillipsburg	Overseer ..	50 00
Wm. Clyde.....	Chateauguay River and tributaries ..	Huntingdon	do ...	50 00
Andrew Watt.....	River Chateauguay, from mouth to village	Chateauguay Basin	do ...	50 00
Alexander Beaton.	The inland waters in rear of the County of Argenteuil	Lost River, P. O., Har- rington	do ...	30 00
L. J. Loranger.....	The inland waters of the County of Terrebonne	St. Sauveur	do ...	100 00
	Carried forward.....			5,590 00

SCHEDULE of Fishery Officers in the several Provinces, &c.—*Continued.*

PROVINCE OF QUEBEC.—*Continued.*

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward.....			\$ ets. 5,590 00
Thomas Evans.....	Inland waters of the Townships of Gore, Wentworth and Howard, in the County of Argenteuil, and those of the Seigniory of Mille Isle and Township of Morin, in the County of Terrebonne.....	Lakefield	Overseer...	30 00
Duncan Dewar.....	Inland waters, Seigniory of Argenteuil, in the Townships of Chatham and Grenville, in the County of Argenteuil.....	St. Andrews.....	do ...	30 00
	Total.....			5,650 00

PROVINCE OF NOVA SCOTIA.

W. H. Wylde.....	Nova Scotia.....	Port Mulgrave.....	Inspector..	1,400 00
W. H. Rogers.....	do	Amherst.....	Fishery Officer...	800 00
<i>Annapolis County.</i>				
W. T. Carty.....	Annapolis County.....	Annapolis	Overseer...	120 00
Miner Clark	Laurencetown Bridge to Clarke's Ferry.....	Bridgetown.....	Warden ...	25 00
James B. Dobson.....	Laurencetown Bridge to County Line, including Nictaux River.....	Laurencetown.....	do ...	25 00
Charles Bartaux...	Nictaux River.....	Wilmot.....	do ...	25 00
J. H. Pineo.....	Lovett's Brook.....	Round Hill.....	do ...	25 00
Thomas Devers....	Annapolis and Languille Rivers.....	Annapolis.....	do ...	25 00
A. F. Mortou.....	Annapolis River.....	Wilmot.....	do ...	25 00
J. H. Parker.....	Nictaux River.....	Nictaux.....	do ...	25 00
<i>Antigonish County.</i>				
A. W. McDonald...	Antigonish County.....	Antigonish	Overseer...	125 00
Angus McDonald...	From mouth of Harbour to foot of Marsh, thence up Tracadie stream to lake, from Marsh up to Monastery Brook, including French Settlement Brook and Tarbits.....			
J. R. Aymer	From mouth of Harbor to Forks, from thence on the Pomquet River to V. Chisholm's Mills, and from Forks on the Black River to Falls.....	Tracadie.....	Warden...	25 00
Albert Randall	From shore to lake	Pomquet Forks, Antigonish	Warden ...	25 00
Colin Chisholm	From Antigonish Harbor to McWilliams or St. Andrew's Bridge.....	Bayfield, W.O.....	do ...	15 00
Lochlin Cameron ..	From McWilliam's Bridge to Frazer's Bridge, including Big Brook.....	Lower South River, Antigonish.....	do ...	25 00
	Carried forward	Upper South River, Antigonish.....	do ...	30 00
				2,740 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—*Continued.*

PROVINCE OF NOVA SCOTIA—*Continued.*

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward....			\$ cts. 2,740 00
<i>Antigonish County—Continued.</i>				
John Cumming.....	From Frazer's Bridge to County line at head of lake	Upper South River, Antigonish.....	Warden ...	20 00
John Dexter.....	From Antigonish Harbor (foot of marsh), to Trotter's Mill Brook, thence up said Brook to Trotter's Mill, including both branches of West River and Bailey's Brook.....	Antigonish.....	do ...	30 00
Donald Chisholm..	From Trotter's Mill Brook to W. Thompson's Dam	Salt Springs, Antigonish	do ...	25 00
Alex. Macadam.....	From Thompson's Dam to Addington Forks' Bridge.....	West River, Addington Forks, Antigonish ...	do ...	25 00
Hugh Cameron.....	From Forks' Bridge to Pinkeytown Bridge, including James River and Beaver River	Addington, W.O.....	do ...	25 00
Duncan Fraser.....	From Pinkeytown Bridge to Stewart's Mill	Ohio	do ...	20 00
James Chisholm...	From Campbell's Rock, on Pomquet River to V. Chisholm's Mill on the Eastern Branch, and to Alexander McDonald's Mill on the Western Branch.....	St. Andrews.....	do ...	25 00
<i>Cape Breton County.</i>				
Francis Quinan ...	From Low Point to South Head of Cow Bay, and north side of Mira Bay, including Salmon River and Sydney River.....	Sydney.....	Overseer...	120 00
Anthony Spencer..	Mira River, Black Brook.....	Mira Gut, W.O.....	Warden ...	25 00
Wm. Burke.....	Mira Bridge and Trout Brook	Burke's Bridge, Mira River.....	do ...	25 00
John McEachen....	Salmon River.....	Grand Mira, Arichat...	do ...	25 00
Thos. Moore.....	Balls and Leech's Creeks	North Sydney	do ...	20 00
Donald McDonald..	Sydney River and Forks.....	Lingan	do ...	20 00
Alex. McLean.	Mill Brook	Mill Brook	do ...	20 00
York Barrington...	North of East Bay to head of Sydney River, including part of Boularderie Island	Sydney Mines	Overseer...	120 00
Alex. McDonald....	South of East Bay to Salmon River ..	East Bay	do ...	120 00
Allan McAdam	Eskasoni.....	Eskasoni	Warden ...	25 00
Angus Morrison....	Marion Bridge, Mira.....	Marion Bridge, Mira.....	do ...	25 00
Denis Murphy	Ponds, Sydney Mines.....	Ponds, Sydney Mines...	do ...	25 00
D. McDonald.....	Salmon Holes, Sydney Forks	Sydney.....	do ...	25 00
M. McLellan.....	Rory Brack's Brook	Rory Brack's Brook	do ...	25 00
P. Keefe.	North-West Brook, Grand Lake and tributaries.....	Lingan	do ...	25 00
Donald M'Cormack	Leitch's Creek and George's River..	Leitch's Creek, W.O..	do ...	25 00
John McNeil.....	Benacadie River emptying into Bras d'Or Lake.....	Benacadie, W.O.....	do ...	25 00
Carried forward .. .				3,605 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—*Continued.*

PROVINCE OF NOVA SCOTIA.—*Continued.*

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward			\$ cts. 3,605 00
<i>Colchester County.</i>				
Wm. Blair.....	Colchester County, East Division.....	Onslow	Overseer...	100 00
G. N. Christie	Salmon River.....	Truro	Warden ...	25 00
Samuel Frame	Shubenacadie River.....	Shubenacadie River ...	do ...	25 00
R. J. Pollock	Stewiacke River (lower portion).....	Lower Stewiacke	Overseer ..	75 00
George Fulton.....	do (upper portion).....	Stewiacke River, Brook-field.....	Warden ...	25 00
J. Bonyman.....	Northern Division, Co. Colchester, comprising Tatamagouche Bay, French and Waugh's Rivers.....	New Annan	Overseer ..	40 00
J. W. Davison	Colchester County, West Division.....	Upper Economy	do ...	100 00
J. Urquhart.....	Waugh's River.....	Tatamagouche River	Warden ...	50 00
W. McElheney	De Bert River.....	Londonderry	do ...	25 00
Henry Urquhart....	Folly River	do	do ...	25 00
Thos. Davidson, 2nd	Portapique River.....	Portapique, W.O	do ...	25 00
George Moore.....	Economy River	Economy	do ...	25 00
Mat. G. Murray	Salmon River.....	Truro	do ...	25 00
William Winton	Lower Stewiacke River.....	Lower Stewiacke	do ...	25 00
Alfred Wright	do do	do	do ...	25 00
<i>Cumberland County.</i>				
Isaac J. Hingley....	Cumberland Co., Eastern Division, embracing all streams emptying into the Straits of Northumberland.....	Oxford	Overseer ..	100 00
Oliver Fillmore	River Philip, Hanam's Falls, upwards.	River Philip	Warden ...	25 00
John W. Moore	do do downwards.	do	do ...	25 00
Jer. Brownell.....	Shinimicas River.....	Shinimicas, Goose R.	do ...	25 00
Asa Fillmore.....	River Philip	River Philip	do ...	25 00
James King.....	Cumberland County, Western Division, including all streams flowing into the Bay of Fundy	Amherst	Overseer ..	100 00
David Corbett	Laplanché and Nappan Rivers.....	do	Warden ...	25 00
Moses Harrison.....	Maccaan River.....	Maccaan, W.O	do ...	25 00
John Canham.....	River Hebert	River Hebert	do ...	25 00
Francis L. Jenks.....	Parrsboro' Head	Parrsboro'	do ...	25 00
W. C. Rindress.....	Wallace River	Wallace	do ...	30 00
Elijah Fowler	Diligent, Ramshead and Fox Rivers, including fisheries from Partridge Island to Spencer Island	Diligent River, Parrsboro'	do ...	30 00
<i>Digby County.</i>				
J. H. Morehouse ...	Digby County	Hillsburg	Overseer ..	120 00
Abraham L. Gavil	Joggins River	Digby	Warden ...	25 00
J. M. Devault.....	Salmon River	Salmon River, W.O	do ...	25 00
Lochlin McKay	St. Mary's Bay	St. Mary's Bay, W.O	do ...	25 00
Robert Journey.....	Sissaboo River	Weymouth	do ...	25 00
J. P. Thibodeau.....	Metaghan River and Comeau's Brook.	Metaghan River	do ...	25 00
Holland E. Payson	Brier and Long Island	Brier Island	Overseer ..	50 00
Louis A. Mélanson	West Division, Digby County	Clare	do ...	75 00
	Carried forward			5,050 00

SCHEDULE of Fishery Offices in the several Provinces, etc.—*Continued.*

PROVINCE OF NOVA SCOTIA—*Continued.*

	Brought forward.....			\$ cts.
<i>Guysborough County.</i>				
James A. Tory.....	Guysborough County.....	Guysborough	Overseer ..	150 00
James Cook	Salmon River, from mouth to Graham's West Line.....	Salmon River, W.O.....	Warden	25 00
James Cahill	From Graham's West Line to foot of Neil's Lake, including North Branch and Lake.....	Salmon River, W.O	Warden	20 00
Charles Kenny.....	From foot of Neil's Lake to Beaver Dam Lake, inclusive, and all the Lakes through which it passes.....	Salmon River, West Branch, Guysboro'	do	15 00
Donald Gunn	From mouth of Scott's Place to Country Harbor Lake, including Gunn's Brook, from Main River to Hurley's Lake	Cross Roads.....	do	30 00
William Pride	From mouth of St. Mary's River to Sinclair's Point, including stream from Wine Harbor to Lake	Sherbrooke, St. Mary's	do	30 00
Thomas McKeen.....	From Forks to County line, including McQueen's Mill and Brook to Lake.....	Melrose	do	30 00
Edward Jordan... ...	From Forks to Indian man's Brook	Glenelg	do	30 00
Robert McKay.....	From head of tide to head of Intervale on the North Branch, and to Cameron's Mill on the Valley Branch	Guysborough, Inter-vale, W.O.....	do	15 00
James R. Bruce.....	From mouth of Clam Harbor River to Upper Falls.....	Guysborough.....	do	10 00
James Nickerson...	From Beach to Falls, including North West Brook.....	New Harbor, W.O	do	15 00
Allan McQuarry ...	St. Mary's River	St. Mary's River, Sherbrook	do	40 00
John McDaniel	District of St. Mary's	Sherbrook.....	Overseer	100 00
Adam Kirk	St. Mary's River, extending from Alex. Ross' (above still waters) to Hugh Halters' on the West River	Glenelg	Warden	30 00
Alex. Ross	St. Mary's River	Stillwater	do	25 00
D. McC. Sinclair...	From Sinclair's Mill to Headwater	Goshen	do	20 00
<i>Halifax County.</i>				
Wm. Anderson	Halifax County. East Division; Dartmouth to Ecum Secum.....	Musquodoboit Harbor..	Overseer	150 00
James Blakely.....	From Ship Harbor to Chezzetcook, inclusive	Ship Harbor	Warden	30 00
William Hall.....	Sheet Harbor	Sheet Harbor.....	do	40 00
John Fitzgerald....	Halifax Harbor to Margaret Bay, Portuguese Cove	Portuguese Cove.....	Overseer	150 00
Archibald Kidston	From Peggy's Cove to Torrance Bay, Nine Mile and Prospect Rivers	Spryfield	Warden	40 00
Nathaniel Mason...	From Hubbert's to Peggy's Cove, Margaret Bay, Ingraham and Indian Rivers	Margaret Bay, Peggy's Cove, W.O.....	do	40 00
Lewis P. Fairbanks	Shubenacadie Canal	Dartmouth	Overseer	No salary.
Danl. Mosher	Cow Bay Run.....	Cow Bay, Dartmouth ..	Warden	20 00
Donald McCleam..	Chezzetcook River.....	Chezzetcook River.....	do	30 00
Donald McDonald.	Laurencetown	Laurencetown.....	do	30 00
	Carried forward			6,165 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—*Continued.*

PROVINCE OF NOVA SCOTIA.—*Continued.*

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward.....			\$ cts. 6,165 00
	<i>Halifax County.—Continued.</i>			
Henry Balcam	Ecum Secum.....	Ecum Secum.....	Warden ...	40 00
John McCurdy.....	Salmon River.....	Salmon River.....	do ...	30 00
James Miller.....	Middle Musquodoboit.....	Middle Musquodoboit...	do ...	30 00
Neil McLean	Tangier River.....	Tangier River	do ...	30 00
Jas. Gardner.....	Pennant River.....	Hubbard's Cove.....	do ...	40 00
John Taylor.....	Musquodoboit Harbor.....	Musquodoboit Harbor..	do ...	30 00
Geo. Parker	Little Musquodoboit River	Little Musquodoboit River	do ...	30 00
John Frazer	Moser's River and Ecum Secum.....	Upper Musquodoboit River	do ...	30 00
Geo. Kiezer	Lake Porter and streams.....	Moser's River	do ...	30 00
Geo. Walker.....	Little Salmon River.....	Lake Porter	do ...	30 00
		Little Salmon River ...	do ...	20 00
	<i>Hants County.</i>			
P. S. Burnham.....	Hants County, Western Division, from Western County Line to Walton ...	Windsor.....	Overseer...	100 00
John W. Dinsmore	Shubenacadie River, from Stewiacke River to Halifax County Line	Shubenacadie.....	Warden ...	30 00
James Mosher.....	Rivers Meander and Herbert, from mouth to source.....	Brooklyn.....	do ...	30 00
T. B. O'Brien	East Division, form Walton to Col- chester Line.....	Maitland	Overseer...	100 00
Joseph Mosher.....	Kennetcook River, from its mouth to head of tide	Newport.....	Warden ...	50 00
James M. O'Brien..	Walton and Kennetcock Rivers.....	Maitland.	do ...	30 00
	<i>Inverness County.</i>			
Hugh Gillis	Inverness County, East Division.....	Forks, Margaree	Overseer...	100 00
Murdoch A. Ross...	do do	N.E. Margaree.....	do ...	100 00
Peter Coady.....	From mouth of Margaree River to South-west Chapel	S.W. Margaree, W.O... .	do ...	25 00
Neil McKay.....	Upper Waters and tributaries, Mar- garee River	S.W. Margaree River...	Warden ...	25 00
John Cameron....	Inverness County, Western Division..	River Inhabitants.	Overseer...	100 00
John Meagher	Mabou River.....	Mabou	Warden ...	25 00
Michael McDonald.	River Dennis.....	River Dennis, W.O.....	do ...	25 00
Donald McDonald.	River Inhabitants.....	River Inhabitants, W.O	do ...	25 00
A. McLellan.... .	do	Broad Cove	do ...	25 00
Hugh Cameron	do	S.W. Mabou	do ...	25 00
James McGarry....	Ainslie Lake	Margaree	do ...	25 00
Kenneth McKenzie	Crowdis Bridge to head of river.....	Big Intervale, N. E.		
Malcolm McLeod...	do do	Margaree.....	do ...	25 00
Mark Crowdis.....	From Crowdis Bridge to Forks, North- east Margaree River.....	do do ...	do ...	25 00
George Ingraham..	From Crowdis Bridge to Forks, North- east Margaree River	do do ...	do ...	25 00
John Carroll.....	From Margaree Harbor to South-west Chapel	S.W. Margaree.....	do ...	25 00
Donald McDonald.	Whycocomagh Bay.....	Whycocomagh.....	do ...	25 00
Malcolm McKay	Trout River.....	Lake Ainslie.....	do ...	20 00
	Carried forward			7,515 00

SCHEDULE of Fishery Officers in the several Provinces, &c.—Continued.

PROVINCE OF NOVA SCOTIA.—Continued.

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward.....			\$ cts. 7,515 00
	<i>King's County.</i>			
Adolphus Bishop....	King's County.....	Kentville	Overseer..	125 00
John E. Starr	do	Port William.....	do	250 00
W. McIntyre.....	Annapolis River	Kentville	Warden ..	30 00
Irad Benjamin	Gasperaux	Gasperaux	do	20 00
John Buchanan ...	do	do	do	20 00
	<i>Lunenburg County.</i>			
Geo. Redden	Lunenburg County, East Division, Middle, Gold, Martins and Musha- mush Rivers.....	Chester	Overseer ..	100 00
Geo. Moland	Eastern River	do	Warden ..	25 00
Jas. Corkum	Middle River	do	do	25 00
Wm Mosher.....	Lower Gold River	do	do	25 00
John Hutt	Middle Gold River	Beech Hill, Chester ..	do	25 00
Edward Boylan....	Gold River, Upper.....	New Ross	do	25 00
Jas. Langille	Martin's River	Chester	do	25 00
Hy. S. Jost	Lunenburg County, West Division.....	Lunenburg	Overseer ..	100 00
Chas. Pernette.....	From mouth of Lahave River to Wilkie's Cove	do	Warden ..	25 00
John Artz	Wilkie's Cove to Henry Koch's	Bridgewater	do	25 00
Jas. Mossman	From Henry Koch's to Knock's	Lunenburg	do	25 00
Edward Morgan	Knock's to source of Lahave River	Lahave River, New Germany, W.O.	do	25 00
John Andrews	Mushamush River	Mahone Bay	do	25 00
Geo. A. Nesbit	Petite River, mouth to Wallace Brook	Petite River	do	25 00
Eli Hebb	Petite River, from Wallace Brook to source	Hebb's Cross, West Conquerall	do	25 00
William Craft	East Gold River, from Bongald's Point to Gold River Branch, thence to Clark's, Clinton's and Henry's Lakes	Chester Basin	do	25 00
	<i>Pictou County.</i>			
John McDonald	Pictou County, East Division, in- cluding Sutherland's, French and Barney's Rivers, Bailey's Brook and Shore Fishery from Pictou Harbor Eastward to County Line	Ponds, W.O.....	Overseer..	170 00
J. McKay.....	Barney's River	Barney's River, W.O.	Warden ..	25 00
Donald Rankin	Sutherland River	New Glasgow	do	25 00
William Stewart	French River	French River	do	25 00
Dan McLean	Bailey's Brook	Bailey's Brook, W.O.	do	30 00
David Marshall	Pictou County, West Division, in- cluding Middle, West, Cariboo, Toney and John Rivers	New Glasgow	Overseer..	140 00
John Turner.....	French River	French River	Warden ..	25 00
Wm. Smith	East River	East River	do	25 00
Robert Archibald	Middle River	Middle River	do	25 00
Wm. Evans.....	West River	West River	do	25 00
A. McKenzie.....	Toney River	Toney River	do	25 00
	Carried forward.....			9,050 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—*Continued.*PROVINCE OF NOVA SCOTIA.—*Continued.*

Name.	District.	Address.	Overseer or Warden.	Salary.
	Bro ght forward.....			\$ cts. 9,050 00
	<i>Pictou County.—Continued.</i>			
David Langille	River John	River John	Warden ...	25 00
George McKenzie..	Cariboo River	Cariboo River	do ...	25 00
John McDonald ...	Barney's River, from McDonald's Bridge to Head	Barney's River, W.O...	do ...	25 00
P. Delaney.....	East River, from Iron Bridge to Grant's Factory, from tide to Iron Bridge Coal Mine.....	Churchville.....	do ...	25 00
William Frazer....	Grant's Factory to East Branch Lake	Bridgeville... ..	do ...	25 00
Donald Frazer	Fork and West Branch Lake.....	Hopewell.....	o ...	25 00
	<i>Queen's County.</i>			
Samuel T.N.Sellon	Queen's County.....	Liverpool.	Overseer...	150 00
Stephen Clements.	Fort Point to Salmon Rocks, Milton Bridge, on Liverpool River.....	do	Warden...	25 00
Theodosius Ford...	Milton Bridge up to Port Liverpool River.....	Milton.....	do ...	50 00
Geo. Snadden.....	Salmon Rock to Puddingpan Island, around the Coast	Liverpool.....	do ...	20 00
Henry Hooker.....	Puddingpan Island to Toby's Island, up Port Medway River, to Dog Cove	Port Medway.....	do	30 00
John Fitzgerald....	From Steam Mills to Salter's Falls on Port Medway River.....	Mill Village.....	do ...	30 00
Barnabas Miles....	Salter's Falls to Pawn Hook on Port Medway River.....	Greenfield, W.O....	do ...	20 00
Stephen Smith.....	Pawn Hook to Brookfield	Liverpool.....	do ...	20 00
Jonathan Smith....	Fort Point to Western Head, Liverpool Harbor.....	do	do ...	15 00
James Farquhar....	Western Head, Liverpool Harbor to Broad River, Port Mouton and Port Joli	do	do ...	30 00
Solomon Lonas....	Port Medway River.....	Mill Village.....	do ...	30 00
	<i>Richmond County.</i>			
Duncan Cameron..	Eastern Division, from River Bourgeoise to East Boundary of County, including said river.....	St. Peters	Overseer...	125 00
John Murchison....	Grand River.....	Grand River, W.O	Warden...	30 00
Edward Ballam....	Western Division, from River Bourgeoise to West Boundary of County	Arichat	Overseer...	125 00
P. W. Grouchy....	Decousse River	Decousse River, Arichat	Warden...	30 00
John Proctor, sen.	Inhabitant's River.....	Port Hawkesbury.	do ...	20 00
Abraham Sampson	Petit Degrat Inlet	Petit Degrat.....	do ...	30 00
Justinian Sampson	L'Ardoise.....	L'Ardoise	do ...	30 00
Charles Grant.....	River Inhabitants.....	River Inhabitants.	do ...	20 00
Alex. Smith	West Bay, Black River.....	West Bay.....	do ...	30 00
Edward Madden....	Rear of River Bourgeoise.....	River Bourgeois.....	do ...	30 00
Geo. Donahoe....	River Moulin	River Moulin, Grangdigue Ferry, W.O....	do ...	30 00
Patrick Kyte.....	River Tier.....	River Tier, St. Peters..	do ...	25 00
Felix Gerroir...	Grand Ruisseau.....	Grand RuisseauArichat	do ...	25 00
William Kehoe....	False Bay and Breen's Brook	River Bourgeoise, W.O	do ...	25 00
	Carried forward			10,195 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—Continued.

PROVINCE OF NOVA SCOTIA.—Continued.

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward.....			\$ ets 10,195 00
	<i>Shelburne County.</i>			
Samuel Muir.....	Shelburne County.....	Shelburne....	Overseer...	125 00
William McKay.....	Clyde River.....	do	Warden...	20 00
M. Greenwood.....	Round Bay River and Indian Brook...	Clyde River, W.O.	do ...	20 00
George Archer.....	Birchtown River.....	Shelburne	do ...	15 00
Richard McGill.....	Roseway River.	do	do ...	20 00
James Turner.....	Jordan River	do	do ...	30 00
L. Freeman	Sable River	Sable River, W.O.	do ...	30 00
Henry Ackerman...	Green Harbor.....	Ragged Island, Locke's Island, W.O.	do ...	20 00
P. Crowell.....	Barrington River.	Barrington	do ...	20 00
	<i>Victoria County.</i>			
J. W. Burke	Victoria County, North Division, from Smoky Head to Bay St. Lawrence...	Ingonish.....	Overseer ..	120 00
Donald McRae, jun	do South Division.....	Baddeck.....	do ...	120 00
John McLellan.....	Middle River.....	Middle River, W. O., Baddeck.....	Warden...	25 00
John McDonald.....	Middle River, Upper Settlement.....	Baddeck ...	do ...	25 00
Donald McQuarrie.	do	do	do ...	25 00
Donald McMillan...	Baddeck River.....	Middle River, W. O., Baddeck	do ...	25 00
Donald McAuley...	do	Baddeck.....	do ...	25 00
Hector McKenzie.....	North River	North River, W.O.	do ...	25 00
Donald McRae.....	Baddeck River and tributaries.....	Baddeck.....	do ...	25 00
Francis Arnold.....	do North Branch	do	do ...	25 00
Angus McDonald..	Washabuck River.....	.....	do ...	30 00
Kenneth Campbell	Indian Brook	Middle River.....	do ...	30 00
Rodrick Beaton....	Hume's River.....	McNaughton's, W.O.	do ...	30 00
William Foyle	Peter's Brook.....	Baddeck River.....	do ...	30 00
John McCharles	Upper Settlement	Middle River	do ...	30 00
Donald Bochaman.	Barachois River.....	Barachois River.....	do ...	30 00
Malcom McIver....	Indian Brook.....	Indian Brook	do ...	30 00
Jos. Guinn.	North River.....	North River	do ...	30 00
Geo. Burton.....	Salmon River, Bay St Lawrence.....	Bay St. Lawrence.....	do ...	30 00
Jos. Helen.....	Cape North.....	Cape North.....	do ...	30 00
	<i>Yarmouth County.</i>			
Enos Gardner.....	Yarmouth County.....	Tusket	Overseer...	150 00
J. A. Hatfield.....	From Reynard's Falls to Lower Nar- rows, Tusket River..	do	Warden...	50 00
William Kavanagh	Gurill's Bridge to Coldstream.....	do	do ...	25 00
William Prosser ...	Branches of River above Reynard's Falls	do	do ...	25 00
Eustace Nickerson	Salmon River.....	Yarmouth	do ...	25 00
Edward Perry.....	Little River	do	do ...	25 00
Jerome Doucet.....	Tusket River	Tusket	do ...	00
Vital Muise.....	Tusket Forks	Tusket Forks.....	do ...	25 00
Joseph M. White...	Eel Lake.....	Eel Lake.....	do ...	00
Wm. Thurston, sen	Chegoggan River.....	Chegoggan River.....	do ...	25 00
	Total.....			11,640 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—*Continued.*

PROVINCE OF NEW BRUNSWICK.

Name.	District.	Address.	Overseer or Warden.	Salary.
				\$ cts.
H. Venning.....	New Brunswick.....	St. John, N.B.....	Inspector Fisheries	
R. Venning.....	do	do	Clerk	1,400 00 400 00
	<i>Albert County.</i>			
inthrop Akerly	County of Albert	Harvey	Overseer	100 00
allace Taylor	Petitcodiac River	Coverdale	Warden	40 00
McLatchey.....	Mouth of Petitcodiac River and Dorchester Bay	Hillsboro'	do	40 00
cob Beck	Pollet River	Elgin	do	30 00
E. Kinne.....	Germantown Lake and Shepody River	Hopewell Corner	do	40 00
Oliver.....	Rocher Bay	Waterside	do	40 00
	<i>Carleton County.</i>			
ugh Miller	Miramichi River (S.W.) from Head Waters to Forks	Glassville	Overseer	30 00
ugh Harrison.....	St. John River and tributaries, from Long's Creek to Tobique River	Woodstock	do	100 00
orge Burt	St. John River	Upper Woodstock	Warden	30 00
W. Scott	St. John River, from Eel River to Woodstock	Canterbury	do	30 00
illiam Thompson	The Upper Waters of the South West Miramichi, in the Parish of Aberdeen	East Glassville, Smith's W.O	do	30 00
	<i>Charlotte County.</i>			
L. Cunningham	Inner Bay of Passamaquoddy	Chamcook, W.O	Overseer	40 00
ames Brown.....	Campo Bello and West Isles, with coast and streams in Charlotte Co.	Campo Bello	do	100 00
patrick Curran.....	St. Croix River and tributaries	Milltown, St. Stephen	do	120 00
T. B. McLaughlin	Grand Manan Island and spawning grounds	Grand Manan	do	40 00
amuel Dick	St. George to Beaver Harbour	La Tête, W.O	Warden	30 00
Robert Dixon	Seeley's Cove to Lepreaux	Lepreaux	do	30 00
enard Best	East District, from La Tête to Lepreaux	Beaver Harbour, W.O	Overseer	100 00
M. Lord	Deer Island	Deer Island	do	50 00
ames Russell	From St. Andrews to mouth of St. Croix River	St. Andrews	Warden	30 00
ndrew Gilmour	Northern Head, Grand Manan	Grand Manan	do	30 00
dward Carroll	Whitehead Island	do	do	30 00
ohn Thomson	West side, Deer Island	Deer Island	do	30 00
ohn Catharan	The Wolves, Mace's Bay and l'Etang Harbour	The Wolves	Overseer	50 00
	<i>Gloucester County.</i>			
ames Hickson	River Nipissiquit and tributaries, with sea coast and streams from Belle-dune River to Grindstone Point	Bathurst	Overseer	250 00
William Bateman	Nipissiquit River	do	Warden	50 00
	Carried forward .....	.....	.....	3,490 00

†Includes boat hire.

SCHEDULE of Fishery Officers in the several Provinces, etc.—Continued.

PROVINCE OF NEW BRUNSWICK—Continued.

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward.....			\$ ets. 3,490 00
<i>Gloucester County—Continued.</i>				
Juste Hache.....	Oyster Beds in County, Caraquet and Shippegan.....	Caraquet	Overseer...	100 00
Justinian Savoy....	Tracadie.....	Tracadie, W.O.....	Warden ...	30 00
John L. Veno.....	Pokemouche.....	Pokemouche.....	do ...	30 00
Frederic Comeau..	Petit Rocher, from Belledune to Mill Stream.....	Elm Tree, Madisco	do ...	40 00
Miles Dempsey.....	Salmon Beach, from Bass River to Grindstone Point.....	Salmon Beach.....	do ...	30 00
Tim. Coughlan.....	Grindstone Point to Grande Anse.....	Grande Anse	do ...	30 00
Adolphe Haché....	Shippegan.....	Shippegan.....	do ...	30 00
W. Rogers.....	Tete-a-gauche River.....	Tete-a-gauche, Bathurst	do ...	25 00
John Calnan, jun..	That part of River Tete-a-gauche from a mile above the Mill Dam to the source of said River	Kinsale.....	do ...	25 00
Alexis Landry,jun.	Pokemouche River	Pokemouche.....	Overseer...	50 00
<i>Kent County.</i>				
Charles Cormier...	Cocagne River.....	Cocagne	Overseer...	100 00
J. McD. Sutherland	Richibucto River.....	Richibucto.....	do ...	75 00
F. B. Légaré	Little Buctouche River.....	Little Buctouche River	Warden ...	30 00
M. A. Girouard ...	Big do do	Buctouche.....	do ...	30 00
James Harnet.....	From the mouth of Nicholas River on the Richibucto upwards, including Nicholas River	Welford	do ...	30 00
Lazare Guimon	From Kouchibouguacis to Chockfish River	Kouchibouguacis.....	do ...	75 00
Nicholas Muzzleroll	From Kouchibouguacis River to Point Sapin.....	do	do ...	50 00
<i>Kings County.</i>				
Samuel Goslin.....	From mouth of Smith's Creek up- wards.....	Smith's Creek, W.O....	Overseer...	100 00
Samuel F. Ryan....	Mill Stream	Studholm, Apohaqui...	Warden ...	30 00
N. H. De Veber.....	St. John River and Belle Isle Bay and streams running thereto	Westfield	Overseer..	50 00
Samuel Gamblin ...	Washademoak Lake and its tributaries in Kings and Queens Counties.....	English Settlement, Pearson's W.O.....	Warden ...	30 00
<i>Northumberland County.</i>				
Prudent Robichaux	Burnt Church River and tributaries, and Upper Tabusintac.....	Upper Neguac	Overseer...	100 00
John Stymast.....	Lower Tabusintac River.....	Stymast Road, Neguac	Warden ...	50 00
William Blake	Tabusintac River, tributaries and Bay	Tabusintac.....	Overseer..	50 00
Amos Perley.....	Miramichi River and Bay, east of Beaubair's Island, in the Parishes of Glenelg and Chatham	Chatham	do ...	100 00
William Cushman..	Miramichi River and tributaries from Beaubair's Island to Blackville	Upper Nelson.....	do ...	160 00
	Carried forward			4,940 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—*Continued.*PROVINCE OF NEW BRUNSWICK.—*Continued.*

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward.....	.....	.....	\$ cts. 4,940 00
	<i>Northumberland County.—Continued.</i>			
N. B. T. Underhill.....	From Lower line of Blackville to Blissville.....	Blackville	Overseer ..	160 00
John Hogan	Miramichi River (N.W.) and tributaries from Chatham Ferry upwards.....	Newcastle.....	do	400 00
Aaron Hovey	Miramichi River (S.W.) and tributaries from Nelson's to Head of Hovey Island.....	Boiestown	Warden	30 00
George Bryanton.....	From Elm Tree Brook to Squire Underhill's, on the S.W. Miramichi River.....	Derby, W.O.....	do	30 00
Kenneth Cameron.....	Miramichi River (S.W.) from line of Blissfield to the head waters and tributaries.....	Boistown.....	Overseer	100 00
Patrick Bergin.....	From Underhill's to Stephen Mitchell's, on S.W.....	Dumphey, W.O., Parish of Blackville, S.W. Miramichi	Warden	30 00
Thomas Smith	From lower end of Fingley's Island, on N.W. Miramichi, upwards, and the Big Sevogle.....	North Esk, Red Bank, W.O.....	do	30 00
J. A. Somers.....	From lower side of Ox Bow, on the Little South West, upwards.....	do do	Overseer	30 00
Patrick Gillis	Little S.W. River and tributaries.....	do do	Warden	30 00
Denis Hogan.....	Renous River and tributaries.....	Renous Bridge, W.O	do	30 00
Michael Donovan	Renous River.....	Renous Bridge	Warden	18 00
Thomas McKenzie.....	From Dunbar's Point on S.W. Miramichi to lower end of Fingley's Island; on Little South West to lower side of Ox Bow.....	Red Bank, North Esk	do	30 00
Henry Oldfield.....	Big Sevogle to Square Forks.....	do do	do	30 00
Findlay McDiarmid	Napan and Black Rivers and tributaries.....	Napan, W.O.....	do	30 00
John Williston.....	Bay du Vin River and Bay, with Parish of Hardwick, Fox and other Islands and Stations on South side of Main Channel of Miramichi River.....	Bay du Vin, W.O.....	Overscer	100 00
James Russell.....	Miramichi Bay and Feeders.....	Lower Newcastle.....	do	150 00
Thomas Taylor	South West Miramichi, within Parish of Blissfield.....	Blissfield	Warden	50 00
William Wyse	Herring Fisheries, Miramichi Bay, and Bass Fishing in Napan Bay and Black River.....	Chatham	Overseer	200 00
Samuel Freeze.....	From Doaktown to Hovey Islands, in the Parish of Blissfield, on the South West Miramichi River.....	Doaktown, Miramichi	do	100 00
John Holmes.....	From lower side Ox Bow, on Little South West Miramichi, upwards.....	Ox Bow, Miramichi	do	50 00
Nat. Morehouse.....	Arbo Settlement, Parish of Blackville, South West Miramichi.....	Arbo Settlement	Warden	30 00
J. T. Coughlan.....	Coughlan Settlement, Parish of Blackville, South West Miramichi.....	Coughlan Settlement	do	30 00
John Doyle	Tabusintac and Bartibog Rivers.....	Bartibog	do	30 00
	Carried forward .....	.....	.....	6,658 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—Continued.

PROVINCE OF NEW BRUNSWICK.—Continued.

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward.....			\$ cts.
				6,658 00
	<i>Queen's County.</i>			
Isaiah Langan	Salmon River	Chipman, W.O., Gas-pereaux	Warden ...	30 00
John Secord	Canaan River.....	Long's Creek, Johnston	do ...	30 00
I. T. Hetherington	From Cole's Island to foot of Washademok Lake.....	Jenkins, W.O. Johnston	do ...	30 00
Robert Phillips....	Headwaters, Washademok Lake.....	.....	do ...	25 00
W. H. Clark.....	Narrows do	Cambridge	do ...	25 00
John J. Camp.....	Jemseg River and Grand Lake.....	do	do ...	30 00
Robert McMann....	Newcastle River and Grand Lake.....	Canning	do ...	25 00
C. Estabrook.....	Between Maguapit and Grand Lakes..	Maguapit Lake.....	do ...	30 00
	<i>Restigouche County.</i>			
E. Ferguson.....	Little Dune River to Morris Rock.....	Dalhousie	Overseer...	100 00
A. McPherson, jun	Charlo River.....	Charlo, W.O.....	Warden...	25 00
J. McMillan.....	Jacquet River	River Lonison, W.O....	do ...	25 00
Dugald Carmichael	do from mouth to Kettle Hole	do	do ...	25 00
	<i>Sunbury County.</i>			
G. W. Hoben.....	St. John River, Indiantown, to County Line of York.....	Burton, W.O.....	Overseer...	100 00
	<i>St. John County.</i>			
Joseph O'Brien....	St. John County.....	Carleton, St. John.....	Overseer...	150 00
Wm. Skillen.....	Eastern part of St. John County, from Quaco Head to Goose River.....	St. Martins.....	do ...	100 00
	<i>Victoria County.</i>			
C. McClusky.....	County of Victoria.....	Grand Falls.....	Overseer...	100 00
Chas. Roberts.....	Lower Division, Tobique River.....	Andover.....	Warden...	30 00
Jno. McDougall....	Three Brooks, branch of Tobique River	Rocky Brook, Parish of Lorne	do ...	30 00
G. Bedell.....	Salmon River.....	Andover	do ...	30 00
Donald Fraser.....	Tobique River.....	Arthurette, W.O	do ...	30 00
Thos. Edgar.....	Middle Division, Tobique River.....	Three Rivers.....	do ...	30 00
Edward Maloney...	Upper Division do	Tobique River, Parish of Lorne.....	do ...	30 00
	<i>Westmoreland County.</i>			
W. B. Deacon.....	Shediac Harbour and River.....	Shediac	Overseer...	100 00
D. T. Cormier.....	Dorchester Bay.....	Gautreau Village.....	do ...	60 00
Hugh Davidson....	Bay Verte, Port Elgin and Tidnish Rivers	Bay Verte	do ...	50 00
	Carried forward			7,898 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—*Continued.*

PROVINCE OF NEW BRUNSWICK.—*Continued.*

Name.	District.	Address.	Overseer or Warden.	Salary.
	Brought forward.....	.....	.....	\$ cts. 7,898 00
<i>York County.</i>				
J. Campbell.....	Grand Pass on St. John River upwards from Crock's Point to Lower Line of York County, including Nashwaak River.....	Kingsclear, W.O., Fredericton	Warden...	60 00
Wm. Brown.....	St. John River, from Upper Line of York County to Crock's Point, on River St. John.....	Southampton.....	do ...	60 00
A. Moir.....	From Price's Bend to Burnt Hill, S.W. Miramichi.....	Bloomfield.....	do ...	30 00
	Total.....	.....	.....	8,048 00

PROVINCE OF PRINCE EDWARD ISLAND.

<i>Queen's County.</i>				
Isaac Thompson...	Queen's County.....	Charlottetown.....	Overseer ..	150 00
Ewen Clark	Dunk River.....	do	Warden...	30 00
Michael Ready.....	Winter River.....	do	do	30 00
James Clow.....	do	do	do	30 00
Lionel Garnam.....	do	do	do	30 00
Wm. Whitehead...	South West River.....	do	do	30 00
Thomas Murphy...	Trout River.....	do	do	30 00
Roderick Morrison	Pinette and Flat Rivers.....	do	do	30 00
Alex. McRae.....	West River.....	do	do	30 00
David Rattray....	Huntley and Wheatley Rivers.....	do	do	30 00
John McMillan	Vernon River.....	do	do	30 00
<i>Prince County.</i>				
John Clark	Prince County	Alberton, P.O.....	Overseer..	150 00
Laurence Phee....	Nail Pond and Skinner's Pond.....	Nail Pond.....	Warden...	30 00
James T. Reid	Minimigash.....	Minimigash.....	do	30 00
James Ramsay.....	Lot 13, Trout River	Lot 13.....	do	30 00
Hugh McIntosh....	Lot 14, do	Lot 14.....	do	30 00
Peter H. Perry....	Tignish, Lots 1 and 2	Tignish.....	do	30 00
Abraham Wall....	Dunk River, Lot 25	Lot 25	do	30 00
Patrick McBride...	do do	do	do	30 00
William Burns.....	do do	do	do	30 00
Nat McArthur.....	Lot 12, or the Narrows.....	Lot 12.....	do	30 00
<i>King's County.</i>				
Martin MacInnis...	King's County.....	St. Peter's Bay.....	Overseer ..	150 00
John Crane.....	Morell River.....	Morell River.....	Warden ...	30 00
James MacInnis....	do	do	do	30 00
John McGuire.....	do	do	do	30 00
	Carried forward .....	.....	.....	1,110 00

SCHEDULE of Fishery Officers in the several Provinces, etc.—*Continued.*PROVINCE OF PRINCE EDWARD ISLAND.—*Continued.*

Name.	District.	Address.	Overseer or Warden.	Salary.
				\$ cts.
	Brought forward.....			1,110 00
<i>King's County.—Continued.</i>				
James MacAulay.....	Midgell River.....	Midgell River.....	do	30 00
Patrick MacInnis.....	North Lake	North Lake.....	do	30 00
Wm. R. Dingwell.....	Bay Fortune River.....	Bay Fortune River.....	do	30 00
John Brien.....	Naufrage River.....	Naufrage River ...	do	30 00
Thomas Clay.....	Grand River.....	Grand River.....	do	30 00
Duncan D. Campbell	Montague River.....	Montague.....	do	30 00
Francis Cook.....	Murray Harbour.....	Murray Harbour.....	do	30 00
Andrew Whelan.....	Souris River.....	Souris River.....	do	30 00
	Total			1,350 00

PROVINCE OF BRITISH COLUMBIA.

Alex. C. Anderson	British Columbia.....	Rosebank, Victoria.....	Inspector Fisheries ..	600 00
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PROVINCE OF MANITOBA.

Donald Gunn.....	Manitoba	Little Britain	Overseer...	200 00
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RECAPITULATION.

Ontario.....		7,750 00
Quebec		5,650 00
Nova Scotia		11,640 00
New Brunswick		8,048 00
Prince Edward Island.....		1,350 00
British Columbia.....		600 00
Manitoba		200 00
	Total	35,238 00

A. J. SMITH,
Minister of Marine and Fisheries.

(Certified,) W. F. WHITCHER,

Commissioner of Fisheries.

APPENDIX No. 2.

STATEMENT of Expenditure on account of Fisheries, for the Fiscal Year ended 30th June, 1877.

To whom paid.	Service.	Amount.	Total.
	ONTARIO.	\$ cts.	
J. W. Kerr.....	Twelve months' salary as Fishery Overseer to 30th June, 1877.....	500 00	
Charles Gilchrist	do	400 00	
James Patton.....	do	250 00	
E. Boismier	do	200 00	
Peter Kiel	do	200 00	
David McMaster.....	do	200 00	
Charles Wilkins	do	200 00	
George Cochrane	do	200 00	
C. L. Bingham.....	do	150 00	
John Mooney	do	150 00	
Peter McCann	do	125 00	
W. E. Foot	do	112 50	
A. C. McKinnon	do	100 00	
Joseph Wilson.....	do	100 00	
Henry Griffiths.....	do	100 00	
J. G. Hicks.....	do	100 00	
Wm. Plews	do	100 00	
Geo. S. Miller.....	do	100 00	
Geo. B. Abrey	do	100 00	
James Sutherland.....	do	100 00	
David Conger.....	do	100 00	
James Muir..	do	100 00	
Samuel Frazer.....	do	100 00	
Henry Lawe	do	100 00	
James Dickson	do	100 00	
Daniel Bowen	do	100 00	
John McGregor	do	75 00	
Wm. Prosser.....	do	60 00	
J. L. Thompson.....	do	50 00	
Hugh Thompson.....	do	50 00	
Dav. Hamilton.....	do	50 00	
A. J. Harrington	do	50 00	
J. McAllister.....	do	50 00	
J. McMichael	do	50 00	
Alex. McKenzie	do	50 00	
Alex. McBride	do	50 00	
Peter Huff.....	do	50 00	
W. A. Palen	do	50 00	
J. G. Wilcox	do	50 00	
John Lyon	do	50 00	
James Cummins.....	do	50 00	
Wm. McGown.....	do	50 00	
Alex. Proulx.....	do	50 00	
	Carried forward	4,971 50	

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward	4,972 50	.....
ONTARIO.—Continued.			
Andrew Telfer.....	Twelve months' salary] as Fishery Overseer, to 30th June, 1877.....	50 00	
John Wallace	do do	40 00	
James McFadden.....	do do	30 00	
Henry Hunt	do do	20 00	
F. McRae.....	Eighteen do do	225 00	
Hugh Ralston.....	Eight d do	133 33	
W. R. Young.....	Six do do	25 00	
Alfred Knight	Four do do	16 66	
Jas. D. McMillan.....	Three do do	12 50	
Jas. S. Webster	Salary as Special Fishery Constable	552 00	
Angus Brady	Salary as Special Guardian, Thames River.....	37 50	
Timothy McQueen	do do	37 50	
F. Maxwell	do Upper Rouge.....	20 00	
James Black.....	do do	20 00	
J. Moon	do Highland Creek	20 00	
James Story.....	do Lyon's Creek.....	30 00	
W. D. Gordon.....	do Duffin's Creek.....	36 00	
John Gordon.....	do do	50 00	
James Patton.....	Arrears of salary, to 30th June, 1876.....	75 00	
Jno. W. Kerr.....	Twelve months' disbursements as Fishery Overseer, to 30th June, 1877.....	690 25	
A. C. McKinnon	do do	117 00	
F. McRae	do do	207 74	
Charles Gilchrist	do do	686 71	
Charles Wilkins	do do	295 00	
John Wallace	do do	21 45	
Jos. Wilson.....	do do	237 57	
Henry Griffiths	do do	45 04	
Jos. L. Thompson.....	do do	15 15	
John Mooney	do do	125 00	
Wm. E. Foot	do do	135 34	
Hugh Ralston.....	do do	208 00	
Jas. Sutherland.....	do do	4 50	
Jno. McAllister	do do	44 50	
James Patton	do do	357 54	
A. J. Harrington.....	do do	136 50	
Alex. McKenzie	do do	115 43	
David Hamilton	do do	82 45	
Samuel Frazer.....	do do	302 65	
G. S. Miller.....	do do	70 50	
James McFadden.....	do do	19 75	
John Lyon.....	do do	21 75	
D. Conger.....	do do	67 50	
Peter Kiel.....	do do	82 50	
Hugh Thompson.....	do do	140 42	
George Cochrane	do do	89 25	
Andrew Telfer	do do	63 95	
Henry Lawe.....	do do	17 50	
William Plews.....	do do	17 00	
C. L. Bingham.....	do do	134 50	
J. G. Hicks.....	do do	18 50	
Peter Huff	do do	6 00	
James Dickson.....	do do	44 50	
	Carried forward.....	11,024 43	.....

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
	Brought forward.....	\$ 11,024 43	\$ cts.
	ONTARIO.—Continued.		
J. McGregor.....	Twelve months' disbursements as Fishery Overseer, to 30th June, 1877.....	30 00	
Peter McCann	do do	58 15	
J. C. Darke	do do	55 13	
D. Bowen	do do	5 50	
James Muir	do do	40 35	
E Boismier.....	do do	50 33	
A. McBride	do do	12 90	
A. Root	do do	145 65	
John Connor	Twelve months' disbursements as Special Fishery Constable.....	138 70	
J. H. Dunlop.....	do do	61 65	
J. S. Webster	do do	137 05	
W. C. Besserer	do do	101 50	
J. Hughes	do do	74 00	
A. Dallaire.....	do do	20 00	
C. Barbeau	do do	87 00	
Wm. Fahey.....	Wages as Special Fishery Guardian, Constant Lake	162 50	
Angus Brady	Disbursement as Special Guardian	22 25	
H. Woodward.....	Disbursements as Special Fishery Guardian, Long Point.....	20 00	
E. J. O'Neil.....	Disbursements enquiry relative to sawdust and mill rubbish, Ottawa River.....	115 75	
J. Purcell.....	do do do	22 75	
W. F. Whitcher.....	Disbursements as Commissioner of Fisheries...	684 53	
A. Diamond	Law costs in suit for violation of Fishery Laws.....	16 20	
C. C. Ray.....	Refund of express charges on confiscated fish.....	3 30	
W. F. Mundy.....	Refund of express charges on whitefish confiscated by Overseer Kerr in 1877.....	31 30	
J. Hutchinson.....	Boat	47 75	
S. S. Macdonnel.....	Professional services in suits for violation of the Fisheries Law.....	14 00	
Wm. Howe.....	Paint.....	3 09	
			13,185 76
	QUEBEC.		
John Mowat	Twelve months' salary as Fishery Overseer, to 30th June, 1877	300 00	
H. W. Austin	do do	200 00	
R. W. H. Dimock	do do	200 00	
C. Caron	do do	200 00	
H. Martin	do do	200 00	
L. E. Grondin	do do	200 00	
Philip Vibert	do do	200 00	
W. C. Willis.....	do do	150 00	
G. L. Duguay	do do	150 00	
J. O. Belanger	do do	150 00	
Gilbert Boulet	do do	150 00	
Alfred Blais	do do	100 00	
J. J. Letourneau	do do	100 00	
L. P. Huo	do do	100 00	
J. Legoueve	do do	100 00	
D. B. McGie	do do	100 00	
J. B. Chevalier	do do	100 00	
	Carried forward.....	2,700 00	

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward	2,700 00	.....
	QUEBEC.—Continued.		
P. Lataverse.....	Twelve months' salary as Fishery Overseer, to 30th June, 1877	100 00	
L. J. Loranger.....	do do	100 00	
W. H. Whitley	do do	75 00	
Job Bilodeau	do do	50 00	
John Phelan	do do	50 00	
Daniel Rosa	do do	50 00	
J. J. Fox	do do	50 00	
P. E. Luke	do do	50 00	
Wm. Clyde	do do	50 00	
Andrew Watt	do do	50 00	
Jos. Boily	do do	50 00	
Geo. Gagnon	do do	30 00	
E. Tremblay.....	do do	30 00	
Jos. Simard	do do	30 00	
Antoine Filion	do do	30 00	
Alexander Beaton.....	do do	30 00	
J. F. Saillant	Eighteen do do	225 00	
P. C. Gobeil	Fourteen do do	175 00	
S. F. Copp	Nine do do	75 00	
G. Mathurin	Six do do	75 00	
Thos. Evans	Four do do	10 00	
D. Dewar	Four do do	10 00	
J. B. Couillard	Three do do	37 50	
Cyrille Dubé	Three do do	7 50	
Jules Gauvreau	One do do	8 33	
Vital Charest.....	One do do	8 33	
Jos. Belanger	Balance of salary to 30th June, 1875	25 00	
P. Gendreau	Suspended salary to 30th June 1876.....	75 00	
Jas. S. Webster	Salary as Special Fishery Constable.....	178 00	
P. Stephens	Balance of wages of self and Assistant Special Fishery Constable, Memphremagog, 1876.....	164 50	
H. G. Patterson.....	Wages as Special Guardian, St. John River.....	256 30	
Magloire Laurendeau.....	do do Magdalen River.....	75 00	
Thomas Gagné	do do Anticosti.....	60 00	
Alf. Malouin.....	do do do	60 00	
R. W. Jones	do do St. Andrews.....	50 00	
A. H. N. Bruce.....	do do Lake Megantic.....	30 00	
D. O'Neil	do do Salmon River.....	25 00	
N. Racicot.....	do do do	25 00	
Alex. Wilson.....	de do Chats Lake.....	20 00	
C. Girard.....	do do Great and Little Nairne Rivers.....	4 00	
H. W. Austin	Twelve months' disbursements as Fishery Overseer, to 30th June, 1877.....	100 00	
W. C. Willis.....	do do	205 55	
D. B. McGie.....	do do	670 00	
John Mowat.....	do do	1,072 90	
J. F. Saillant	do do	714 58	
Alex. Beaton	do do	33 65	
Daniel Rosa	do do	179 85	
Clovis Caron.....	do do	225 09	
Philip Vibert.....	do do	625 71	
	Carried forward.....	9,131 79	.....

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ ets.	\$ ets.
	Brought forward.....	9,131 79	
QUEBEC.—Continued.			
J. E. Chevalier.....	Twelve months' disbursements as Fishery Overseer, to 30th June, 1877.....	84 00	
Andrew Watt.....	do do	20 00	
Geo. L. Duguay.....	do do	107 00	
Gilbert Boulet.....	do do	97 15	
Joseph Boily.....	do do	29 75	
G. Mathurin.....	do do	115 40	
Jos. Belanger.....	do do	98 05	
J. Legouve.....	do do	88 00	
J. J. Fox.....	do do	37 00	
J. Phelan.....	do do	29 00	
P. C. Gobeil.....	do do	97 50	
L. P. Huot.....	do do	16 82	
P. E. Luke.....	do do	64 94	
J. J. Letourneau.....	do do	85 90	
Job Bilodean.....	do do	23 45	
L. E. Grondin.....	do do	148 70	
J. B. Couillard.....	do do	25 00	
P. Latraverse.....	do do	25 00	
Geo. Gagnon.....	do do	13 60	
William Clyde.....	do do	9 55	
M. A. Filion.....	do do	21 00	
S. F. Copp.....	do do	100 00	
L. J. Loranger.....	Disbursements to 31st December, 1875.....	57 25	
John Connor.....	do as Special Fishery Constable.....	84 50	
C. Barbeau.....	do do	265 00	
Denis O'Neil.....	do do	48 16	
N. Racicot.....	do do	25 00	
J. S. Webster.....	do do	50 00	
R. W. Jones.....	do do	25 00	
A. Dallaire.....	do do	20 00	
L. Smalien.....	do do	41 00	
P. Morin.....	do do	22 00	
W. F. Whitcher.....	do as Commissioner of Fisheries.....	511 18	
Alexis Simard.....	Wages as Fishery Guardian, Saguenay River.....	171 17	
E. Potvin.....	do do Upper Saguenay.....	119 17	
D. McLaren.....	do do River St. John.....	100 00	
M. Dumesnil.....	do do Laval River.....	50 00	
N. Simard.....	do do do	40 00	
A. Tremblay.....	do do Bergeron	18 00	
Jos. Belanger.....	Assistance as Special Fishery Guardian.....	30 50	
Jos. Paradis.....	do do	15 00	
Thos. Therien.....	Fishery Guardian, Bergeron.....	12 00	
R. Morin.....	Men and boats at L'Anse St. Jean.....	20 00	
M. Dumesnil.....	Wages as Boatman	10 00	
Alex. Tremblay.....	do	14 67	
Thos. Terrien.....	Labour.....	60 00	
Nap. Gauthier.....	do	10 00	
Str. Saguenay.....	Towage, &c.....	13 50	
Nicholas Etienne.....	Canoe.....	14 00	
Jos. Boes.....	Repairing canoe	4 35	
Jos. Radford.....	Wages of men, &c	30 84	
Laurent Lévesque.....	Board of Special Fishery Constable.....	26 13	
Jos. Belanger.....	do do	12 50	
Thos. Therien.....	Boatman.....	4 67	
	Carried forward	12,394 19	

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward.....	12,394 19	.....
QUEBEC.—Continued.			
Flavien Tremblay	Repairing skiff.....	8 00	
Jos. Fortier.....	Passage of Special Guardian.....	1 50	
Jos. Dion	Board do	14 00	
Amable Girard.....	Boat for Overseer, Godboat Division.....	30 00	
Job Bilodeau	Cost of suit in prosecution for alleged violation of Fisheries Act.....	28 40	
S. P. Bauset	Disbursements inquiring into bar fishing and disputes, St. Jean Port Joli.....	75 00	
W. A. Comeau.....	Disbursements trying angling facilities of Trinity River.....	25 00	
L. E. Grondin.....	Bailiff's account.....	31 19	
A. Rattée.....	Storage of boats	36 00	
Chas. Duberger.....	Registry of deed of transfer of property at L'Anse à L'Eau.....	2 98	
S. F. Copp	To pay balance of wages of Fishery Constables at Lake Memphremagog, 1876	161 90	
Esmonde Bros.....	Camp utensils for Fishery Constables.....	8 00	
N. Lavoie.....	To pay for Militia stores.....	10 00	
Richard Burton.....	Removing obstructions, Little Cascapedia River...	30 00	
John Mowat.....	To pay expenses of suit in seizure of Wm. Phee's drift net.....	78 00	
S. P. Bauset.....	Disbursements of visit to Sorel to investigate pickerel breeding.....	50 00	
C. King & Co	Tent for Special Fishery Constables.....	7 50	
J. B. St. Laurent.....	Making models of fishways.....	18 00	
			12,909 66
NOVA SCOTIA.			
County of Annapolis.			
W. T. Carty.....	Twelve months' salary, to 30th June, 1877.....	120 00	
Thomas Devers.....	do do	25 00	
Miner Clark.....	do do	25 00	
J. H. Pineo	do do	25 00	
Charles Barteaux.....	do do	25 00	
J. Durland.....	Nine do do	18 75	
J. B. Dobson.....	Three do do	6 25	
A. F. Morton.....	do do	6 25	
J. H. Parker.....	do do	6 25	
			257 50
County of Antigonish.			
A. W. McDonald.....	Twelve months' salary, to 30th June, 1877.....	125 00	
Angus McDonald	do do	27 50	
J. R. Aymer.....	do do	25 00	
Albert Randall.....	do do	15 00	
Colin Chisholm.....	do do	25 00	
Lochlin Cameron	do do	27 50	
John Cumming.....	do do	20 00	
John Dexter.....	do do	30 00	
Donald Chisholm.....	do do	25 00	
Alex. McAdam.....	do do	25 00	
Hugh Cameron	do do	25 00	
Duncan Frazer.....	do do	20 00	
			390 00
	Carried forward		647 50

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward.....		647 50
<i>Nova Scotia.—Continued.</i>			
<i>County of Cape Breton.</i>			
Francis Quinan.....	Twelve months' salary, to 30th June, 1877.....	120 00	
Anthony Spencer.....	do	25 00	
J. McEachern.....	do	25 00	
Thomas Moore.....	do	20 00	
Donald McDonald.....	do	20 00	
Alex. McLean.....	do	20 00	
York Barrington.....	do	120 00	
Alex. McDonald.....	do	120 00	
Allan McAdam.....	do	25 00	
Angus Morrison.....	do	25 00	
Denis Murphy.....	do	25 00	
D. McDonald.....	do	25 00	
M. McLellan.....	do	25 00	
Patrick Keefe.....	do	25 00	
D. McCormack.....	do	25 00	
J. McNeil.....	do	25 00	
Thos Burke.....	Nine do	22 92	
Wm. Burke.....	One do	2 08	
			695 00
<i>County of Colchester.</i>			
Wm. Blair.....	Twelve months' salary, to 30th June, 1877.....	100 00	
G. N. Christie.....	do	25 00	
Samuel Frame.....	do	25 00	
R. J. Pollock.....	do	75 00	
Geo. Fulton.....	do	25 00	
Jas. Bonyman.....	do	40 00	
J. W. Davidson.....	do	100 00	
J. Urquhart.....	do	50 00	
W. McElheney.....	do	25 00	
H. Urquhart.....	do	25 00	
Geo. Moore.....	do	25 00	
M. G. Murray.....	do	25 00	
Wm. Winton.....	do	25 00	
Geo. Ambrose.....	Ten do	20 83	
Thos. Davidson, 2nd.....	Ten do	20 83	
H. M. Fulton.....	Two do	4 15	
Alf. Knight.....	Two do	4 17	
			614 98
<i>County of Cumberland.</i>			
Isaac J. Hingley.....	Twelve months' salary, to 30th June, 1877.....	100 00	
Olivet Fillmore.....	do	25 00	
J. W. Moore.....	do	25 00	
J. Brownell.....	do	25 00	
Asa Fillmore.....	do	25 00	
Jas. King.....	do	100 00	
David Corbett.....	do	25 00	
Moses Harrison.....	do	25 00	
F. L. Jenks.....	do	25 00	
W. C. Rindress.....	do	30 00	
Elijah Fowler.....	do	30 00	
J. H. Barnes.....	Eleven do	22 92	
J. Canham.....	One do	2 08	
			460 00
	Carried forward.....		2,417 48

STATEMENT of Expenditure on account of Fisheries, etc.—*Continued.*

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	<i>Brought forward.....</i>		2,417 48
	<i>NOVA SCOTIA.—Continued.</i>		
	<i>County of Digby.</i>		
J. H. Morehouse.....	Twelve months' salary, to 30th June, 1877.....	120 00	
A. L. Gavil.....	do do	25 00	
J. M. Devault.....	do do	25 00	
Lochlin McKay.....	do do	25 00	
Robert Journey.....	do do	25 00	
J. P. Thibodeau.....	do do	25 00	
H. E. Payson.....	do do	50 00	
L. A. Melançon.....	do do	75 00	
			370 00
	<i>County of Guysborough.</i>		
Jas. A. Tory.....	Twelve months' salary, to 30th June, 1877.....	150 00	
James Cook.....	do do	25 00	
James Cahill.....	do do	20 00	
Charles Kenny	do do	15 00	
Donald Gunn.....	do do	30 00	
Wm. Pride.....	do do	30 00	
Edward Jordan.....	do do	30 00	
Wm. McKay.....	do do	15 00	
J. R. Bruce.....	do do	10 00	
Jas. Nickerson.....	do do	15 00	
Allan McQuarrie.....	do do	40 00	
John McDaniel.....	do de	100 00	
Adam Kirk.....	do do	30 00	
Alex. Ross.....	do do	25 00	
Thos. McKean.....	Six do do	15 00	
D. McC. Sinclair.....	One do do	1 66	
			551 66
	<i>County of Halifax.</i>		
Wm. Anderson.....	Twelve months' salary, to 30th June, 1877.....	150 00	
James Blakely.....	do do	30 00	
Wm. Hall.....	do do	40 00	
J. Fitzgerald.....	do do	150 00	
Archd. Kidston.....	do do	40 00	
Nathl. Mason.....	do do	40 00	
Donald McCleam	do do	30 00	
Donald McDonald.....	do do	30 00	
Henry Balcam	do do	30 00	
John McCurdy.....	do do	30 90	
Neil McLean	do do	40 00	
Jas. Gardner	do do	30 00	
John Taylor	do do	30 00	
Geo. Parker	do do	30 00	
John Frazer	do do	30 00	
Geo. Keizer	Thirteen do do	32 50	
Patrick Hughes.....	do do	25 00	
James Miller	Two do do	5 00	
			792 50
	<i>County of Hants.</i>		
P. S. Burnham.....	Twelve months' salary to 30th June, 1877.....	100 00	
J. W. Dinsmore.....	do do	30 00	
James Mosher.....	do do	30 00	
	<i>Carried forward.....</i>		160 00
			4,131 64

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward	160 00	4,131 64
	NOVA SCOTIA.—Continued.		
	County of Hants.—Continued.		
T. B. O'Brien	Twelve months' salary, to 30th June, 1877.....	100 00	
Joseph Mosher.....	do do	50 00	
J. M. O'Brien	do do	30 00	
			340 00
	County of Inverness.		
M. A. Ross.....	Twelve months' salary to 30th June, 1877.....	100 00	
Hugh Gillis	do do	100 00	
Peter Coady.....	do do	25 00	
Neil McKay	do do	25 00	
John Cameron.....	do do	100 00	
John Meagher	do do	25 00	
Kenneth McKenzie.....	do do	25 00	
Michael McDonald	do do	25 00	
Donald McDonald	do do	25 00	
A. W. McLellan	do do	25 00	
Hugh Cameron	do do	25 00	
James McGarry	do do	25 00	
Malcolm McLeod	do do	25 00	
Mark Crowdus	do do	25 00	
Geo. Ingraham	do do	25 00	
John Carroll	do do	25 00	
Donald McDonald	do do	25 00	
Malcolm McKay	Nine do do	15 00	
			665 00
	County of Kings.		
Adolphus Bishop	Twelve months' salary to 30th June, 1877	125 00	
J. E. Starr	do do	250 00	
W. McIntyre	do do	30 00	
Irad Benjamin	do do	20 00	
John Buchanan	do do	20 00	
			445 00
	County of Lunenburg.		
Geo. Redden	Twelve months' salary to 30th June, 1877	100 00	
Geo. Moland	do do	25 00	
James Corkum	do do	25 00	
Wm. Mosher.....	do do	25 00	
John Hutt	do do	25 00	
James Langille	do do	25 00	
H. S. Jost	do do	100 00	
Charles Pernette	do do	25 00	
John Artz	do do	25 00	
James Mossman	do do	25 00	
Edw. Morgan	do do	25 00	
John Andrews	do do	25 00	
G. A. Nesbit	do do	25 00	
Eli Hebb	do do	25 00	
Ed. Boylan	do do	25 00	
Wm. Croft	do do	25 00	
			550 00
	Carried forward		6,131 64

STATEMENT of Expenditure on account of Fisheries, etc.—*Continued.*

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
Brought forward.....			6,131 64
<i>Nova Scotia.—Continued.</i>			
<i>County of Pictou.</i>			
John McDonald	Twelve months' salary to 30th June, 1877	170 00	
J. McKay	do do	25 00	
Donald Rankin	do do	25 00	
Wm. Stewart	do do	25 00	
D. McLean	do do	30 00	
David Marshall	do do	140 00	
John Turner.....	do do	25 00	
Wm. Smith	do do	25 00	
Robt. Archibald	do do	25 00	
Wm. Evans.....	do do	25 00	
A. McKenzie.....	do do	25 00	
D. Langille	do do	25 00	
Geo. McKenzie	do do	25 00	
J. McDonald	do do	25 00	
P. Delaney	do do	25 00	
Wm. Frazer	do do	25 00	
Donald Frazer.....	do do	25 00	
			690 00
<i>County of Queens.</i>			
S. T. N. Sellon.....	Twelve months' salary, to 30th June, 1877	150 00	
Stephen Clements.....	do do	25 00	
Theo. Ford	do do	50 00	
Henry Hooker	do do	30 00	
Jno. Fitzgerald	do do	30 00	
Barnabas Miles	do do	20 00	
Stephen Smith.....	do do	20 00	
Jonathan Smith	do do	15 00	
James Farquhar.....	do do	30 00	
Soloman Lonas	do do	30 00	
Wm. Buchanan	Six do do	10 00	
Geo. Snadden.....	do do	5 00	
			415 00
<i>County of Richmond.</i>			
Duncan Cameron.....	Twelve months' salary, to 30th June, 1877	125 00	
Edward Ballam.....	do do	125 00	
P. W. Grouchy	do do	30 00	
J. Proctor	do do	20 00	
Abraham Sampson	do do	30 00	
J. Sampson.....	do do	30 00	
Charles Grant	do do	20 00	
Alex. Smith	do do	30 00	
Edward Madden	do do	30 00	
Geo. Donohoe	do do	30 00	
Patrick Kyte.....	do do	25 00	
Felix Gerroir.....	do do	25 00	
Wm. Kehoe.....	do do	25 00	
Alex. Urquhart	Eleven do do	27 50	
J. Murchison	One do do	2 50	
			575 00
<i>County of Shelburne.</i>			
Samuel Muir.....	Twelve months' salary, to 30th June, 1877.....	125 00	
Wm. McKay	do do	20 00	
M. Greenwood	do do	20 00	
Geo. Archer.....	do do	15 00	
			180 00
Carried forward			7,811 64

STATEMENT of Expenditure on account of Fisheries, etc.—*Continued.*

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward	180 00	7,811 64
<i>NOVA SCOTIA.—Continued.</i>			
<i>County of Shelburn.—Continued.</i>			
Richard McGill.....	Twelve months' salary to 30th June, 1877.....	20 00	
James Turner.....	do do	30 00	
L. Freeman.....	do do	30 00	
P. Crowell	do do	20 00	
H. Ackerman.....	Six months' salary to 31st December, 1876	10 00	290 00
<i>County of Victoria.</i>			
J. W. Burke	Twelve months' salary, to 30th June, 1877.....	120 00	
Donald McRae, jun	do do	120 00	
Jno. McLellan.....	do do	25 00	
Jno. McDonald.....	do do	25 00	
Donald McQuarrie	do do	25 00	
onal McMillan.....	do do	25 00	
Donald McAulay.....	do do	25 00	
Hector McKenzie.....	do do	25 00	
Donald McRae	do do	25 00	
Francis Arnold.....	do do	25 00	
Angus McDonald.....	do do	30 00	
Kenneth Campbell.....	do do	30 00	
Roderick Beaton.. ..	do do	30 00	
Wm. Foyle	do do	30 00	
Jno. McCharles... ..	do do	30 00	
Donald Bochanan	do do	30 00	
Malcolm McIvor	do do	30 00	
Jos. Guinn.....	do do	30 00	
Geo. Burton.....	do do	30 00	
Jos. Hellen.....	do do	30 00	740 00
<i>County of Yarmouth.</i>			
Enos Gardner	Twelve months' salary, to 30th June, 1877	125 00	
J. A. Hatfield.....	do do	50 00	
Wm. Kavanagh.....	do do	25 00	
Wm. J. Prosser.....	do do	25 00	
Eustace Nickerson.....	do do	25 00	
Ed. Perry.....	do do	25 00	
Jerome Doucette.....	do do	30 00	
Vital Muise	do do	25 00	
Jos. M. White.....	do do	25 00	
Wm. Thurston.....	do do	25 00	380 00
DISBURSEMENTS OF FISHERY OVERSEERS.			
Jno. Fitzgerald.....	Twelve months' disbursements, to 31st Dec., 1876..	70 25	
Wm. Anderson.....	do do	115 25	
Adolphus Bishop.....	do do	42 10	
Fraucis Quinan.....	do do	53 25	
Alex. McDonald.....	do do	35 65	
	Carried forward.....	316 50	9,221 64

STATEMENT of Expenditure on account of Fisheries, etc.—Continued

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward.....	316 50	9,221 64
	Nova Scotia.—Continued.		
	<i>Disbursements.—Continued.</i>		
J. W. Burke	Twelve months' disbursements, to 31st Dec., 1876..	47 00	
Donald McRae	do	50 95	
J. B. O'Brien.....	do	49 35	
P. S. Burnham	do	32 50	
M. A. Ross.....	do	63 50	
Hugh Gillis.....	do	34 00	
Duncan Cameron.....	do	32 00	
Edward Ballam.....	do	59 15	
J. H. Morehouse.....	do	46 00	
Isaac J. Hingley.....	do	17 51	
James King.....	do	39 00	
S. T. N. Sellon.....	do	109 49	
Jas. A. Tory	do	43 47	
Jno. McDonald.....	do	37 50	
David Marshall.....	do	47 19	
Geo. Redden.....	do	49 45	
H. S. Jost.....	do	40 00	
Wm. Blair.....	do	15 30	
J. W. Davidson.....	do	32 25	
Estate, W. H. Ryer.....	do	38 19	
J. McDaniel.....	do	44 10	
Alex. McDonald.....	do	49 50	
W. T. Carty	do	68 50	
J. Cameron.....	do	72 43	
Y. Barrington.....	do	46 50	
Samuel Muir.....	do	71 20	
Peter Coady	do	38 50	
H. E. Payson	do	3 00	
Enos. Gardner.....	do	106 50	
L. A. Melançon.....	do	48 50	
		1,749 03	
W. H. Wylde.....	Twelve months' salary as Inspector of Fisheries....	1,371 96	
Receiver-General.....	Superannuation tax on Mr. Wylde's salary.....	21 00	
W. H. Rogers	Twelve months' salary as Fishery Officer, Nova Scotia	783 96	
Receiver-General.....	Superannuation tax on W. H. Roger's salary.....	12 00	
W. H. Wylde.....	Twelve months' disbursements as Inspector of Fisheries.....	600 00	
W. H. Rogers.....	Twelve months' disbursements as Fishery Officer...	850 00	
A. B. Wilmot.....	Salary for May, as Fishery Officer in charge of Bedford Basin Fish-breeding Establishment....	66 66	
H. Hesselein & Son.....	Travelling expenses of Mr. Whitcher.....	67 61	
A. F. Church.....	Maps, Co. Annapolis.....	10 00	
Wm. Miller.....	Night watching, River Philip.....	45 00	
Geo. King.....	do do	42 50	
J. J. Wylde.....	Copying Annual Report.....	51 00	
G. A. Kent.....	Zinc trunk.....	10 00	
George Foot.....	Salary as Fishery Warden, from 1st January to 30th April, 1874.....	8 33	
W. T. Carty.....	Expenses suit, T. A. Gavaza, 1873.....	13 50	
A. W. McKinlay	Stationery for Inspector of Fisheries.....	47 30	
F. G. Tolson	Labour at Bedford.....	65 00	
George Reeves.....	Levelling grounds.....	40 00	
A. B. Wilmot.....	On account of travelling expenses.....	50 00	
		4,156 82	
		15,127 49	

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
NEW BRUNSWICK.			
<i>County of Albert.</i>			
Winthrop Akerley	Twelve months' salary, to 30th June, 1877	100 00	
Wallace Taylor.....	do do	40 00	
C. McLatchey	do do	40 00	
Jacob Beck	do do	30 00	
J. C. Kinne	do do	40 00	
B. Olliver.....	do do	40 00	
		-----	290 00
<i>County of Carleton.</i>			
H. Miller.....	Twelve months' salary, to 30th June, 1877.....	30 00	
H. Harrison	do do	100 00	
Geo. Burt.....	do do	30 00	
J. W. Scott	do do	30 00	
Wm. Thompson.....	do do	30 00	
		-----	220 00
<i>County of Charlotte.</i>			
B. L. Cunningham	Twelve months' salary, to 30th June, 1877.....	40 00	
James Brown.....	do do	100 00	
Pat. Curran.....	do do	120 00	
W. B. McLaughlin	do do	240 00	
Samuel Dick	do do	30 00	
Robt. Dickson	do do	30 00	
Leonard Best	do do	100 00	
J. M. Lord	do do	50 00	
James Russell.....	do do	30 00	
Andrew Gilmour.....	do do	30 00	
Edward Carroll.....	do do	30 00	
J. Thompson	do do	30 00	
J. Catheran.....	do do	50 00	
		-----	880 00
<i>County of Gloucester.</i>			
James Hickson	Twelve months' salary, to 30th June, 1877.....	250 00	
Wm. Bateman.....	do do	50 00	
Justé Hatché	do do	100 00	
J. Savoy	do do	30 00	
J. L. Veno	do do	30 00	
Fred. Comeau	do do	40 00	
Miles Dempsey	do do	30 00	
Tim. Coughlan.....	do do	30 00	
H. A. Sormany.....	do do	30 00	
Wm. Rogers	do do	25 00	
Jno. Calnan, jun.....	do do	25 00	
Alexis Landry.....	do do	50 00	
		-----	690 00
Carried forward.....			
			2,080 00

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward		2,080 00
<i>NEW BRUNSWICK.—Continued.</i>			
<i>County of Kent.</i>			
C. Cormier.....	Twelve months' salary, to 30th June, 1877.....	100 00	
J. McD. Sutherland.....	do do	75 00	
F. B. Légaré.....	do do	30 00	
M. A. Girouard	do do	30 00	
James Harnett.....	do do	30 00	
Lazare Guimon	do do	75 00	
Nicholas Muggeroll.....	do do	50 00	
		390 00	
<i>County of Kings.</i>			
Samuel Gosline.....	Twelve months' salary, to 30th June, 1877.....	100 00	
S. F. Ryan.....	do do	30 00	
N. H. Deveber.....	do do	50 00	
S. Gamblain.....	do do	30 00	
		210 00	
<i>County of Northumberland.</i>			
Prudent Robichaux.....	Twelve months' salary, to 30th June, 1877.....	100 00	
Wm. Blake.....	do do	50 00	
Amos Perley	do do	100 00	
Wm. Cushman.....	do do	160 00	
N. B. T. Underhill.....	do do	160 00	
John Hogan.....	do do	400 00	
Aaron Hovey	do do	30 00	
Geo. Bryenton.....	do do	30 00	
Kenneth Cameron.....	do do	100 00	
Patrick Bergin.....	do do	30 00	
Thos. Smith.....	do do	30 00	
Patrick Gillis.....	do do	30 00	
Denis Hogan.....	do do	30 00	
Michael Donavan.....	do do	18 00	
Thos. McKenzie.....	do do	30 00	
Henry Oldfield.....	do do	30 00	
John Williston.....	do do	100 00	
James Russell.....	do do	150 00	
Thomas Taylor.....	do do	50 00	
John Sty mast	do do	50 00	
Wm. Wyse.....	do do	200 00	
Samuel Freeze.....	do do	100 00	
John Holmes	do do	50 00	
Nat. Morehouse.....	do do	30 00	
J. T. Coughlan.....	do do	30 00	
David Somers.....	Nine do 31st December, 1876	22 50	
Robt. Brimner	Six do	15 00	
Jos. Chaplain.....	do do	15 00	
F. McDairmaid	do 30th June, 1877.....	15 00	
J. A. Somers.....	Three do	7 50	
		2,163 00	
	Carried forward		4,843 00

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		£ cts.	\$ cts.
	Brought forward.....		4,843 00
NEW BRUNSWICK.—Continued.			
<i>County of Queens.</i>			
Isaiah Langan.....	Twelve months' salary, to 30th June, 1877	30 00	
John Secord.....	do do	30 00	
Isaac T. Hetherington.....	do do	30 00	
W. H. Clark	do do	25 00	
J. J. Camp.....	do do	30 00	
R. McMann.....	do do	25 00	
Robt. Philips.....	do do	25 00	
Carey Esabrooks.....	Three do do	7 50	
			202 50
<i>County of Restigouche.</i>			
E. Ferguson.....	Twelve months' salary, to 30th June, 1877	100 00	
A. McPherson, jun.....	do do	25 00	
J. McMillan.....	do do	25 00	
D. Carmichael.....	do do	25 00	
Wm. McMillan.....	Six do do	50 00	
			225 00
<i>County of Sunbury.</i>			
Reuben Hoben.....	Ten months' salary, to 30th April, 1877	83 33	
G. W. Hoben.....	Two do June, 1877	16 67	
			100 00
<i>County of Victoria.</i>			
C. McCluskey.....	Twelve months' salary, to 30th June, 1877	100 00	
Chas. Roberts.....	do do	30 00	
Jno. McDougall.....	do do	30 00	
Geo. Bedell.....	do do	30 00	
Donald Frazer.....	do do	30 00	
Thomas Edgar.....	do do	30 00	
Edwd. Maloney.....	do do	30 00	
			280 00
<i>County of St. John.</i>			
Jos. O'Brien.....	Twelve months' salary, to 30th June, 1877	150 00	
Wm. E. Skillen	do do	100 00	
			250 00
<i>County of Westmoreland.</i>			
Wm. B. Deacon	Twelve months' salary, to 30th June, 1877	100 00	
D. T. Cormier	do do	60 00	
H. Davidson	do do	75 00	
			235 00
<i>County of York.</i>			
J. Campbell	Twelve months' salary, to 30th June, 1877	60 00	
Wm. Brown	do do	60 00	
A. Moir.....	do do	30 00	
			150 00
	Carried forward.....		6,285 50

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
	Brought forward	\$ cts.	\$ cts.
			6,285 50
	NEW BRUNSWICK.—Continued.		
	DISBURSEMENTS OF FISHERY OVERSEERS.		
D. T. Cormier.....	Twelve months' disbursements, to 31st Dec., 1876..	37 75	
W. B. Deacon.....	do do	74 00	
H. Davidson.....	do do	26 50	
W. E. Skillen.....	do do	5 00	
Jos. O'B:ien.....	do do	26 00	
Reuben Hoben.....	do do	25 00	
E. Ferguson.....	do do	32 30	
Wm. McMillan.....	do do	15 00	
Wm. Wyse.....	do do	56 16	
Samuel Freeze.....	do do	33 00	
James Russell.....	do do	11 60	
John Williston.....	do do	23 00	
Kenneth Cameron.....	do do	10 00	
John Hogan.....	do do	121 52	
N. B. T. Underhill.....	do do	27 50	
Amos Perley.....	do do	37 00	
Wm. Blake.....	do do	15 00	
Prudent Robichaux.....	do do	30 00	
N. H. Deveber.....	do do	30 60	
Samuel Gosline.....	do do	80 60	
J. McD. Sutherland.....	do do	53 25	
Charles Cormier.....	do do	30 00	
Justinian Savoy.....	do do	15 50	
Juste Haché.....	do do	13 80	
Wm. Bateman.....	do do	26 00	
James Hickson.....	do do	158 00	
Leonard Best.....	do do	17 50	
W. B. McLaughlin.....	do do	50 00	
P. Curran.....	do do	57 50	
James Brown.....	do do	34 30	
E. L. Cunningham.....	do do	67 50	
Winthrop Akerley.....	do do	43 03	
Wallace Taylor.....	do do	5 90	
John Stymast.....	do do	14 25	
Hugh Miller.....	do do	19 50	
Wm. Brown.....	do do	25 94	
Chas. McCluskey.....	do do	31 00	
Wm. Cushman.....	do do	50 40	
Thos. Taylor.....	do do	34 25	
			1,463 95
W. H. Venning.....	Twelve months' salary as Inspector of Fisheries....	1,371 96	
Receiver-General.....	Supervannation tax on W. H. Venning's salary....	28 46	
C. R. Venning.....	Twelve months' salary as Clerk to Insp'r of Fisheries	332 91	
W. H. Venning.....	Twelve months' disbursements as Inspector of Fisheries.....	600 00	
J. H. Harding.....	Travelling expenses.....	14 60	
H. Chubb & Co.....	Postage stamps.....	40 00	
R. D. McArthur.....	do	30 00	
R. P. & W. F. Starr.....	Coal	21 93	
D. McAlpine.....	Directory	2 00	
W. & J. Anslow.....	Advertising	7 00	
Lordly Howe & Co.....	Furniture	22 65	
J. H. Harding.....	To pay Overseers and Wardens, balance of salaries, to 30th June, 1876.....	947 57	
			3,419 08
			11,168 53

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
PRINCE EDWARD ISLAND.			
<i>County of Kings.</i>			
Martin MacInnis	Fifteen months' salary, to 30th June, 1877.....	187 50	
John Crane	do do	37 50	
James MacInnis.....	do do	37 50	
John McGuire	do do	37 50	
Jas McAulay	do do	37 50	
Patrick MacInnis.....	do do	37 50	
W. R. Dingwell	do do	37 50	
John Brien	do do	37 50	
Thomas Clay.....	do do	37 50	
D. D. Campbell.....	do do	37 50	
Frs. Cook	do do	37 50	
			562 50
<i>County of Queens.</i>			
Isaac Thompson	Twenty-one months salary, to 30th June, 1877.....	262 50	
Ewen Clark	Fifteen do to 31st Dec., 1876	32 64	
Michael Ready.....	Twenty-one do to 30th June, 1877.....	47 64	
James Clow	do do	47 64	
Lionel Garnim	do do	47 64	
Wm. Whitehead	Fifteen do do	37 50	
Thomas Murphy.....	do do	37 50	
Koderick Morrison	do do	37 50	
Alex. McRae.....	do do	37 50	
David Rattray	do do	37 50	
Jno. McMillan	do do	37 50	
			663 06
<i>County of Prince.</i>			
John Clark	Fifteen months' salary, to 30th June, 1877.....	187 50	
Jas. T. Reid	do do	37 50	
James Ramsay.....	do do	37 50	
Hugh McIntosh.....	do do	37 50	
A. Wall	Ten do do	25 00	
Wm. Burns.....	do do	25 00	
N. McArthur	do do	25 00	
Martin Phee	do do	25 00	
P. H. Perry.....	Nine do do	22 50	
Laurence Phee	Five do do	12 50	
P. McBride.....	Four do do	10 00	
			445 00
DISBURSEMENTS.			
John Clark.....	Disbursements as Fishery Overseer.....	248 00	
James Ramsay.....	To pay law costs.....	42 34	
D. Currie.....	Preparing statistics	10 50	
Wm. Mitchell.....	Postage stamps.....	2 00	
Registry Office	Copy of grant.....	1 30	
			304 14
			1,974 70

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
BRITISH COLUMBIA.			
A. C. Anderson	Twelve months' salary as Inspector of Fisheries...	600 00	
do	Twelve months' travelling disbursements.....	35 00	<u>635 00</u>
MANITOBA.			
Donald Gunn.....	Salary as Fishery Overseer, from 1st April to 30th June, 1876.....	250 00	<u>250 00</u>
FISH-BREEDING.			
<i>Newcastle Establishment, Ontario.</i>			
Samuel Wilmot.....	Twelve months' salary as Superintendent, Newcastle Fish-breeding Establishment.....	1,959 96	
Receiver-General.....	Superannuation tax on S. Wilmot's salary.....	62 00	
M. P. Ketchum.....	Specimens of fish	3 25	
A. Frazer & Co.	do	29 30	
Walter Bright.....	Labour at Fish-breeding Establishment	10 50	
John Otten	do do	31 50	
Allan Otten.....	do do	14 40	
Alex. Parker.....	do do	48 50	
Wm. Skeldon.....	do do	54 37	
Thos. Gousell.....	do do	172 50	
Wm. Dawson.....	do do	25 45	
Richard Spencer	do do	165 94	
Jos. Neevin.....	do and teaming do	189 75	
T. G. O'Neil.....	Horse hire.....	2 25	
J. A. Wilkinson	Printing notices.....	2 50	
Philipps & Thorne.....	Lamp chimneys.....	11 45	
Rubber Co.	Rubber hose.....	28 00	
J. R. Barefeldt.....	Hardware, coal oil, etc.....	79 19	
Hall, Kay & Co.	Galvanized iron	27 00	
A. H. Walbridge	Postage stamps	49 87	
J. F. Coleman.....	Taxidermy.....	81 75	
Jas. Wright	Iron vats.....	62 38	
Haney Soper.....	Rent of water privilege, Barber's Creek	10 00	
Wm. Sands.....	Nets	5 00	
Wm. Ridge.....	Lumber	15 00	
Geo. Montreuil	Fish eyes	1 64	
Frank Nicholson	Coal	150 12	
Jas. Neevin	Disbursements as Assistant Caretaker.....	72 95	
Wm. Parker.....	Salary do do	700 00	
E. C. Lowe	do do do	300 00	
G. M. Clark	Rent of water power	125 00	
S. Wilmot	Teaming, etc.....	40 50	
Massey & Co.	Carpenter's work	11 20	
Dominion Telegraph Co.	Telegrams	54 62	
Montreal Telegraph Co.	do	3 57	
S. Wilmot	Travelling disbursements	775 60	
Page & Kidder	Paraffine varnish.....	72 25	
T. G. Rice	Wire cloth.....	189 35	
	Carried forward.....	5,638 61	

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts	\$ cts.
	Brought forward	5,638 61	.....
FISH-BREEDING.—Continued.			
<i>Newcastle Establishment, Ontario.—Continued.</i>			
Simmons & Jardine.....	Fish trays.....	153 06	
F. Farracomb.....	Duty on varnish	5 49	
Kerr & Co.....	Castings.....	12 18	
S. Wilmot.....	Rental of premises, Fish-breeding Establishment ..	299 59	
Ludlow Trout Co.....	Trout ova.....	125 00	
Alex. Parker.....	Tending trap nets.....	127 50	
Haskins & Son.....	Fish cans	34 35	
John Spicer.....	Brushes.....	1 15	
C. E. Lowe.	Disbursements as Assistant Caretaker.....	56 83	
James Wright.....	Iron tank, etc.....	86 73	
J. H. Rolfe.....	Painting.....	58 66	
Thos. Douglas.....	Wading boots	23 50	
Philips & Thorne.....	Rubber hose.....	22 75	
John Reid.....	Cedar posts.....	45 00	
James Speers	do	114 00	
Massey & Co.....	Coal stove, etc	56 29	
Simmons & Jardine.....	Making tanks and troughs	427 78	
Peter Coleman.....	Fishery Guardian, Darlington Creek	81 50	
Alex. Parker.....	do Baldwin's Creek.....	65 00	
D. J. Hinman.....	do Grafton Creek.....	50 01	
Wm. McMann	do do	20 00	
Alf. Bright.....	Picking ova.....	5 60	
Spencer & Gousell	Work, digging, etc.....	30 00	
Thomas Reno	Baskets.....	2 50	
Matthew Wilson.....	Setting nets	15 00	
S. Manning.....	Barrels	1 60	
Wm. Alexander.....	Belting	1 15	
John Wilmot	Survey and plan of Fish-breeding Establishment ..	25 00	
William Hooper.....	Masonry.....	4 62	
S. Wilmot.....	Sundry disbursements.....	60 20	
Furniture Co.	Furniture.....	7 70	
			7,658 16
<i>Sandwich Establishment, Ontario.</i>			
James Neevin.....	Eighteen months' salary as officer in charge, to 30th June, 1877	750 00	
do	Disbursements distributing fry.....	173 40	
C. W. Gaauthier	Building Sandwich Fish-breeding Establishment..	1,336 60	
Waterous Engine Works.	Engine and pump.....	650 06	
Geo. Levasseur	Engineer.....	19 00	
D. Lemonde.....	do	297 00	
Joli & Bros.	Picking ova.....	51 27	
Martin O'Brien.....	do	28 10	
Joseph Dufour.....	do	9 65	
H. S. Johnson.....	do	21 57	
William Shields.....	do	57 45	
F. D. Forest.....	do	25 70	
C. H. Hagart.....	do	21 38	
G. E. Gaauthier.....	Putty and glass.....	2 68	
James Hollingworth....	Water pipe	13 75	
	Carried forward	3,437 45	7,658 16

STATEMENT of Expenditure on account of Fisheries, etc.—*Continued.*

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward	3,437 55	7,658 16
FISH-BREEDING.— <i>Continued.</i>			
<i>Sandwich Establishment, Ontario.—Continued.</i>			
M. Imbeck.....	Hose.....	7 57	
Royal Insurance Co.....	Insurance.....	25 00	
A. O'Gorman.....	Wood.....	5 50	
G. Lavasseur	Labourers' wages.....	39 00	
D. Lemonde.....	Repairing pump.....	12 00	
James Neevin.....	Board.....	54 00	
D. Lemonde	Wooden trays	11 70	
W. S. Carrington	Banking up building.....	9 00	
C. E. Sibley.....	do do	11 00	
George Wilson.....	Chimney	2 00	
F. T. Waterous	Water pipes.....	14 92	
C. M. Kendrel.....	Tinware	35 42	
Far & McKee	Lumber.....	89 89	
Pequonock & Co.....	Oil, etc	67 60	
James Neevin.....	Sundry disbursements.....	284 55	
S. Wilmet	Coal oil.....	19 50	
do	Travelling disbursements.....	95 00	
Thomas C. Sutton.....	Sponges	5 20	
S. Hottie.....	Horse hire.....	14 50	
Haskin & Son.....	Fish hatchers.....	50 00	
Detroit Metal Co.....	Iron tubing	27 89	
Robert Adamson.....	Timber.....	5 00	
William McMahon.....	Spawning fish.....	36 00	
M. O. Brien.....	Painting trays.....	14 75	
			4,374 54
<i>Tadousac Establishment, Quebec.</i>			
P. Plourde.....	Twelve months' wages as Caretaker, to 30th June, 1877.....	413 47	
Jerry Miles.....	Twelve months' wages as Assistant Caretaker, to 30th June, 1877.....	111 20	
D. McLaren.....	Wages as Special Guardian.....	77 50	
Narcisse Simard.....	Guardian, Petite Isle	76 00	
Joseph Belanger.....	Board and wages as Special Fishery Constable.....	97 30	
Richard Morin	Tending salmon nets at L'Anse aux Pilotes.....	60 33	
Faustin Boivin	Attending Reception House at L'Anse St. Jean.....	160 48	
Joseph Radford.....	Pay-list of men employed at Fish-breeding Establishment, for May, 1876	132 30	
do	do do June, 1876.....	186 60	
do	do do July, 1876.....	100 30	
do	do do August, 1876..	13 80	
do	do do June, 1877.....	24 05	
do	do do July, 1877.....	41 13	
	Commission on expenditure, Fish-breeding Establishment, from 1st July to 31st Dec., 1876.....	211 38	
Thomas Terrien.....	Wages as Boatman.....	27 50	
Joseph Radford.....	Petty disbursements.....	24 30	
Frs. Boulliane	Labour	8 93	
George Manning.....	do	2 75	
W. Manning.....	do	9 80	
	Carried forward.....	1,779 12	12,032 70

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward.....	1,779 12	12,032 70
FISH-BREEDING.—Continued.			
<i>Tadousac Establishment, Quebec.—Continued.</i>			
L. Levesque.....	Labour.....	2 00	
Damase Tremblay.....	do	5 40	
Jerry Miller.....	do	16 18	
H. Plourde.....	do	1 93	
L. Tremblay.....	do	2 00	
John Poitras.....	do	4 80	
Louis Perron.....	do	1 50	
Frs. Morin	do	4 50	
Jos. Morin.....	Whitewashing.....	2 50	
Greg. Boulliane.....	Timber for L'Anse au Pilote fishery.....	4 70	
Alex. Terrien.....	Timber.....	3 40	
Wm. Manning	do	66 43	
J. Picard.....	Lumber.....	33 80	
L. Leclerc.....	do	20 56	
Narcisse Morin	Shingles	6 00	
Steamer "Saguenay"	Fare, Special Guardians.....	4 00	
E. Roy	Board, Special Fishery Constable.....	2 20	
N. Rouleau.....	Board of W. Parker.....	7 50	
Bernard Boulliane.....	Filling ice house.....	2 00	
Isidore Tremblay.....	Nets for L'Anse au Pilote fishery	10 33	
Thos. Terrien.....	Trout net.....	1 00	
Flavien Tremblay.....	Flat for L'Anse au Pilote fishery	6 00	
Jules Tremblay.....	Blacksmith's work.....	28 49	
Jerome Tremblay.....	Nets for Petite Isle fshery.....	4 20	
D. Tremblay.....	Nets.....	2 60	
S. & D. Pednault.....	Towing raft.....	3 00	
Steamer "Union"	Transport of young salmon, freight, &c.....	23 75	
Steamer "St. Lawrence"	Passage of Special Policemen from Tadousac to Quebec, freight, &c	36 95	
Quebec and Gulf Port S.S. Company	Freight.....	6 92	
Luc Mallart.....	Repairing fish house	99 70	
Jos. Radford.....	Freight and express charges.....	5 70	
F. Bouchard.....	Hire of sail boat.....	23 33	
F. Bourgeoin.....	Hardware.....	17 65	
Jos. Boivin.....	Hardware, tools, &c.....	118 21	
F. Boivin.....	Cartage and boat hire.....	7 35	
Roger Terrien.....	Making boom.....	15 45	
N. Rouleau	Blacksmith's work.....	2 53	
A. Fortier	Seining trout.....	3 00	
Jos. Radford.....	Fare and expenses to Quebec and back.....	9 60	
Express Co.....	Freight charges.....	4 55	
W. Miller.....	Stationery.....	1 80	
E. Lacroix	Fare to Quebec	1 00	
Frs. Bourgeoin	Provisions	4 89	
O. Boulliane.....	Glassware	9 07	
Price & Co	Lumber.....	28 33	
P. Plourde	Expenses taking salmon fry to River Ouelle, River St. Thomas, Murray Bay, Ste. Anne, St. Marguerite and Petit Saguenay.....	71 62	
Hypolite Tremblay	Taking salmon fry to Petit Saguenay.....	2 00	
Xavier Gagnon	Taking salmon fry.....	2 00	
	Carried forward.....	2,531 54	12,032 70

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward.....	2,531 54	12,032 70
FISH-BREEDING.—Continued.			
<i>Tadousac Establishment, Quebec.—Continued.</i>			
J. Gravel.....	Taking salmon fry at Ste. Marguerite.....	2 60	
Jos. Hovington.....	Boat hire with salmon fry to Petit Saguenay.....	5 00	
Donald McLaren.....	Expenses with salmon fry to River Ouelle.....	9 75	
Cimon Dufour.....	Taking salmon fry up Ste. Margaret's River.....	1 00	
Isidore Tremblay.....	Repairing canoe.....	1 20	
P. Plourde.....	Cartage of salmon fry.....	2 00	
Jos. Morin	Taking nets at L'Anse au Pilote.....	1 50	
Roger, Terrien & Son	Repairing, retaining dams.....	9 20	
G. B. Du Tremblay.....	Survey and plan of establishment.....	100 00	
E. Lacroix	Wages as Special Fishery Guardian.....	158 60	
J. Paradis	do do	39 00	
J. D. Marsan.....	Wire-netting.....	57 63	
Aug. Letarte.....	do	19 18	
J. Parent & Co	Lime	7 80	
J. Park & Son	Sealeads.....	10 00	
Z. Lapierre.....	Boat.....	54 00	
C. & W. Wurtele.....	Iron and chain	26 35	
S. Bedard.....	Stove and pipes	15 40	
J. H. Shea.....	Earthenware.....	2 50	
Wm. Watson	Sails.....	30 89	
T. Rontier.....	Breeding troughs.....	50 90	
F. X. Belanger.....	Stuffing specimens of fish.....	43 75	
O. Plamondon.....	Duty on varnish	5 39	
P. Stephens.....	Disbursements as Special Fishery Constable	15 00	
W. C. Holt	Freight	7 95	
			3,198 18
<i>Gaspé Basin Establishment, Quebec.</i>			
P. Vibert.....	Twelve months' salary as Fishery Officer in charge.....	300 00	
do	Disbursements in connection with Fish-breeding Establishment	158 11	
Henry Davis.....	Wages as Assistant Care taker.....	299 40	
John Davis.....	Setting and tending salmon nets.....	165 40	
W. C. Davis	do do	92 50	
P. Vibert.....	do do	11 15	
Wm. Stanley	do do	5 85	
Alf. Stanley	do do	41 20	
Felix Coffin.....	do do	36 00	
John Basque.....	do do	42 00	
Jas. B. Coffin	do do	36 00	
R. S. Coffin	do do	18 00	
Ab. Coffin.....	do do	29 50	
Alf. Davis	do do	5 00	
J. S. Davis	do do	36 90	
Locke Patterson.....	Making salmon nets	25 87	
Widow B. Coffin.....	do do	14 00	
J. Leboutillier.....	Hardware, cordage, etc.....	36 03	
J. & E. Collas	do do	9 70	
H. G. Patterson	Fishing scow.....	25 00	
John Davis	Distributing salmon fry.....	6 10	
	Carried forward.....	1,393 71	15 230 88

STATEMENT of Expenditure on account of Fisheries, etc.—*Continued.*

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward	1,393 71	15,230 88
FISH-BREEDING.— <i>Continued.</i>			
<i>Gaspé Basin Establishment, Quebec.—Continued.</i>			
G. & C Hassock.....	Provisions.....	11 51	
John McCallum.....	Guarding Malbaie River.....	80 25	
Jos. E. Patterson	Distributing salmon fry.....	11 46	
W. C. Coffin	Cordwood.....	5 50	
Anne Kane	Stove-pipes.....	5 50	
J. & E. Collas.....	Oil-cloth suit, ropes, etc.....	7 68	
Jos. Eden & Son.....	Freight	0 60	
A. J. Carter.....	Cane broom	1 15	
Jos. Eden & Son.....	Tin pail.....	1 30	
			1,518 66
<i>Restigouche Establishment, Quebec.</i>			
John Mowat.....	Fifteen months' salary as Officer in charge.....	337 50	
do	Disbursements in connection with distribution of salmon fry.....	94 85	
John Landry.....	Wages as Care taker.....	120 00	
Jos. Beaulieu.....	do do	40 00	
John Moffat.....	Salmon twine.....	58 50	
Wm. Robertson.....	Ropes, nets, etc	25 00	
Wm. Lees	Distributing cans.....	17 17	
Anthony Kerr	Distributing salmon, Nouvelle River.....	10 00	
Wm. Robertson	Distributing salmon, Upsilonquitch River.....	12 00	
Thos. Mowat.....	do do	12 00	
John Ferguson.....	Repairing dams, sluiceways, etc	40 00	
Wm. Robertson	Building fence, etc.....	50 00	
do	Tending salmon nets.....	30 00	
Robt. Nelson.....	Procuring parent salmon.....	30 00	
James Moores.....	do do	33 00	
James Miles.....	do do	14 00	
Alex. Mowat.....	do do	30 00	
			954 02
<i>Bedford Basin Establishment, Nova Scotia.</i>			
A. B. Wilmot.....	Ten months, salary as officer in charge.....	668 60	
do	Travelling disbursements, to 30th June, 1877.....	451 20	
F. G. Tolson	Labour at Bedford Establishment.....	330 50	
R. D. Fultz	do do	38 25	
Alf. Tolson	do do	39 00	
J. Kent.....	do do	9 00	
Geo. Reeves	Labour at dam and fence	53 75	
T. Wade	Labour on dam and wall	12 50	
T. Patton	Fishing for salmon	73 75	
J. H. Stockton	do	7 50	
T. Hefler.....	do	7 75	
W. Matheson.....	do	50 00	
Wm. Ronche.....	do	14 00	
Jas. Starrett.....	do	8 75	
Danl. Frazer.....	do	13 83	
Robert Archibald.....	do	11 00	
	Carried forward.....	1,787 38	17,703 56

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward.....	1,787 38	17,703 56
FISH-BREEDING.—Continued.			
<i>Bedford Basin Establishment, Nova Scotia.—Continued.</i>			
Wm. McCabe.....	do	43 75	
Wm. Beck.....	do	44 75	
E. G. Archibald.....	do	22 00	
Geo. Crockett.....	do	23 00	
G. J. Durland.....	do	34 50	
E. D. Whiteman	do	39 00	
Wm. Tolson	do	9 00	
W. Patton.....	Guarding salmon.....	65 00	
J. McCabe	do	22 00	
Wm. R. Evans.....	do	28 00	
R. B. Fillmore.....	Making nets.....	24 17	
Jas. Lawlor.....	Building coal shed.....	276 16	
J. G. Corbin.....	Timber posts.....	11 30	
J. H. Annes.....	Lumber	2 50	
W. R. Evans.....	do	7 00	
D. Fullerton.....	do	7 50	
Moir & Co.	do	46 00	
W. Roche, jun.....	Coal	72 89	
C. Neal.....	do	5 17	
Thompson & Stewart.....	do	5 85	
R. Anderson.....	Freight on coal.....	12 00	
A. B. Wilmot.....	To pay for wove wire	4 25	
Smith & Co.	Cans for carrying fish.....	23 50	
J. Vanbuskirk.....	Carting coal	5 00	
J. Mitchell.....	Carting clay and gravel.....	17 35	
A. B. Wilmot.....	Paid putting up spawning house at River Philip.....	165 52	
J. W. Currie.....	Oil, chimnies, &c.....	20 48	
Valentine Wood.....	Canoe	7 00	
W. Moore	Horse hire	46 55	
D. M. Geldert	do	24 50	
James Scott.....	Supplies.....	8 00	
T. D. Corbett.....	do	11 00	
T. Walsh & Co.	Paints.....	15 32	
Geo. Henderson.....	Mason work	14 39	
W. Gavil.....	Wading boots and oil cloth	10 50	
H. H. Fuller & Co.	Dynamite, rope, &c.....	27 51	
W. Dunscob	Stove pipe, &c.....	5 31	
Jas. Cills.....	Digging ditch.....	3 44	
Wm. Wood	Stove, &c.....	7 25	
Thompson & Wood	Rent of land at Oxford Reception House	20 00	
J. J. Hingley.....	Hardware, &c.....	18 05	
D. Murray & Co.	Window blinds	2 04	
Williams & Leverman.....	Mattrass	3 00	
Baxton Bros.....	Chairs.....	4 50	
Smith & Co.	Stove and waste pipe	19 42	
H. H. Fuller & Co.	Salmon twine.....	10 09	
T. A. S. DeWolf & Son.	Cement.....	12 03	
J. Melvin	Coal barrels and coopering	5 85	
Williams & Leverman.....	Boxes.....	17 00	
W. H. Smith	Distribution barrels	14 00	
	Carried forward	3,131 77	17,703 56

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward.	3,131 77	17,703 56
FISH-BREEDING.—Continued.			
<i>Belford Basin Establishment, Nova Scotia.—Continued.</i>			
J. E. Wilson.....	Stove lining, grate, &c.....	7 50	
B. O'Neil & Co.	Hatching trays.....	340 00	
J. Vanbuskirk	Wheelbarrow.....	4 00	
G. Lovett.....	Boat hire, conveying salmon.....	5 00	
			3,488 27
<i>Miramichi Establishment, New Brunswick.</i>			
Isaac Sheasgreen.....	Salary as officer in charge.....	366 63	
do	Horse hire.....	21 17	
do	Varnish.....	1 82	
do	Freight	6 00	
W. H. Venning.....	Travelling expenses in connection with Fish-breeding Establishment	125 00	
E. Tozer.....	Contract of building drains, etc	200 00	
A. B. Wilmot.....	Telegrams	11 51	
R. R. Call.....	Freight	52 04	
D. & J. Ritchie.....	Lumber	32 62	
E. Sinclair.....	do	6 00	
J. Phinney	Tin kettles, stove pipes, etc	7 67	
Chas. Salis.....	Spawning boxes	40 00	
J. W. Lee	Fish cans	16 00	
W. H. Venning.....	Dip net	6 00	
A. Quick.....	Twine	23 05	
W. & G. Watt	Salmon twine	2 70	
John Hogan	Horse hire	70 00	
do	Freight	7 01	
James Fisk & Sons.....	Paint and brushes	8 83	
T. McAvity & Son	Wire cloth	6 60	
J. C. Stone	Express charges	4 20	
Thos. Mullin	Labour	80 80	
Peter Hogan	do	53 20	
F. P. Sheasgreen.....	do	25 15	
Thos. McKenzie	do	64 00	
F. P. Shea green.....	Carting coal	21 40	
R. R. Call	Coal	30 00	
S. Wilmot	Disbursements of special enquiry, Miramichi Establishment	100 00	
			1,388 80
GENERAL DISBURSEMENTS			
W. F. Whitcher	Disbursements as Commissioners of Fisheries.....	386 76	
H. Grist	Patenting fish hatching apparatus.....	100 00	
Charles Stewart	Building retaining dam, Charleston Lake.....	14 00	
J. Girard	Repairs to fishway, River à Mars.....	264 38	
F. Boivin	Building boom at L'Anse St. Jean reception house.....	39 70	
Geo. Redden	Removing obstructions from Middle river, County Lunenburg, N.S.	76 00	
R. M. King	Building fishway, River Gaspe, N.S.	119 13	
	Carried forward	999 97	22,580 63

STATEMENT of Expenditure on account of Fisheries, etc.—Continued.

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward.....	999 97	22,580 63
	GENERAL DISBURSEMENTS.—Continued.		
W. R. Calder.....	Building fishways, Lahave River.....	86 13	
W. T. Atherton.....	Horse hire.....	34 00	
L. R. Poulin.....	Board of Special Guardians, Salmon River.....	24 00	
C. Barbeau.....	Wages and disbursements as Special Fishery Guardian.....	100 00	
W. Besserer.....	Wages and disbursements as Special Fishery Guardian.....	25 00	
J. Connor.....	Wages and disbursements as Special Fishery Guardian.....	20 00	
J. S. Webster.....	Wages and disbursements as Special Fishery Guardian.....	60 00	
G. W. Burland.....	Report and views of Newcastle Establishment.....	100 00	
Esmonde Bros.....	Wading boots.....	8 00	
	Total.....		1,457 10
	FISHERIES PROTECTION STEAMER "LADY HEAD."		24,037 73
Napoleon Lavoie.....	Twelve months' salary as Commander.....	1,400 00	
do.....	Twelve months' disbursement.....	448 13	
Pay List.....	Wages of crew as per pay list.....	4,430 32	
do.....	Wages of crew for placing vessel in winter quarters as per pay list.....	490 75	
Louis Bouget.....	Provisions.....	1,438 16	
G. Bouchard.....	do.....	566 65	
N. Lavoie.....	do.....	634 20	
W. Ives & Sons.....	do.....	162 36	
Jos. Eden.....	do.....	135 97	
M. Dunn & Son.....	do.....	104 25	
M. Dion & Son.....	do.....	27 50	
F. Flamondon.....	Fish.....	34 15	
L. Marois.....	Vegetables.....	188 70	
L. Arcé.....	Meat.....	243 88	
Jno. Davidson.....	Bread.....	32 80	
D. Langlois.....	Milk.....	14 60	
Taché & Co.....	Preserved meats.....	86 40	
M. Dion.....	Flour and fish.....	62 00	
W. Barbour.....	Repairs to engine and boiler.....	651 15	
T. Routier.....	do do.....	443 52	
S. Carroll.....	do do.....	131 20	
G. T. Davie.....	Repairs.....	84 37	
Geo. Bisset.....	do.....	21 15	
Pay List.....	do.....	37 34	
J. O'Donohoe.....	Repairs to compass.....	5 75	
M. McCallum.....	do.....	1 50	
J. Boivin.....	Iron for repairs.....	20 21	
C. W. Wurtele.....	do.....	130 07	
F. Henshaw.....	Coals.....	822 00	
A. Fraser & Co.....	do.....	350 00	
A. Poston & Co.....	do.....	241 50	
Audet & Robitaille.....	Freight on coal.....	371 00	
A. Fraser & Co.....	do.....	162 75	
Jos. Eden.....	do.....	198 50	
do.....	Wharfage on coal.....	149 50	
	Carried forward.....	14,322 33	

STATEMENT of Expenditure on account of Fisheries, etc.—*Continued.*

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward	14,322 33	.....
	FIHERIES PROTECTION STEAMER "LADY HEAD."— <i>Continued.</i>		
J. Barbour.....	Outfit to engine	190 95	
Routier.....	Outfit	80 48	
ay List.....	Lifting boiler, &c.....	66 00	
Routier.....	do	78 60	
ibeauveau & Co	Cloth	336 00	
Vandry.....	Linen	2 40	
J. Ives & Son	Pilotage, provisions, &c.....	110 65	
binic & Baudet.....	Powder.....	26 50	
Glassford.....	Fire extinguisher.....	80 00	
elanger and Gariepy.....	Files	28 95	
J. Shaw & Co.....	Cartridges.....	13 50	
os. Eden	Lumber, hardware, &c.....	53 73	
rcher & Co.....	Lumber.....	18 45	
Dinning.....	do	3 15	
Boivin.....	Hardware.....	148 74	
M. Duchene.....	Uniforms.....	99 35	
L. Lavoie.....	do	30 00	
M. Morin	do	20 00	
Derry & S. Lemay.....	do	16 00	
Watson.....	Sails	265 74	
Apt. C. Morin.....	Board and expenses.....	61 50	
T. Phillip.....	Emery cloth.....	6 00	
Boivin.....	do	2 10	
Eo. Bisset.....	Turning	1 80	
os. Boivin.....	Plate, rivets, &c.....	11 11	
V. E. Brunet.....	Medicines.....	18 65	
Casault.....	Duty on leak stoppers.....	8 54	
Whithead & Turner.....	Tube brushes.....	5 00	
M. Wood.....	Leak stoppers.....	52 71	
eo. Bisset.....	Valves and plates.....	62 32	
Marmen.....	Cartage.....	53 25	
Rouillard.....	Washing.....	39 00	
Boivin.....	Putty, bolts, &c.....	27 40	
do	Buckets, paint, &c.....	79 05	
M. Tardivel.....	Painting ribbons.....	15 00	
O. Vallerand.....	Lamps, chimnies, &c.....	42 30	
Hollowell.....	Stationery.....	17 75	
uder & Rohitaillé.....	Rope, canvas, pitch, &c.....	131 06	
Desgagne	Labour.....	22 40	
A. Turcot	Rockets.....	12 00	
C. Casey & Co.....	Stores.....	10 00	
Terrien & Bros.....	Castings.....	8 00	
state, Flanigan.....	Moorage.....	9 00	
Quebec & Gulf Ports S.S. Co.....	Freight	24 25	
Dawson & Co.....	Stationery.....	4 57	
Bedard.....	Stove pipe and kitchen utensils.....	62 05	
Cunningham	Life buoy, blacksmith's work.....	35 00	
Leclerc.....	Jackscrew hire	41 40	
Fazhenry.....	Cleaning and painting.....	32 00	
A. Fraser & Co.....	Moorage.....	10 50	
Boivin.....	Leck.....	1 30	
	Carried forward.....	16,898 53	.....

STATEMENT of Expenditure on account of Fisheries, etc.—*Continued.*

To whom paid.	Service.	Amount.	Total.
		\$ cts.	\$ cts.
	Brought forward.....	16,898 53	.....
FISHERIES PROTECTION STEAMER "LADY HEAD."—			
<i>Continued.</i>			
E. Farrell.....	Medical attendance.....	37 00	
Forsythe & Co.....	Oil.....	62 50	
John Stairs.....	Oil.....	32 55	
H. H. Fuller	Nails.....	1 15	
G. Davidson & Co	Chimnies and burners.....	4 65	
R. & J. Vinecoe.....	Glass.....	4 00	
McIntosh & McInnes.....	Lumber.....	6 53	
P. Grant & Co.....	Towels	4 20	
J. A. Stuart	Repairs to lamps	5 10	
R. H. Cogswell.....	Rating chronometer.....	3 00	
			17,059 21

RECAPITULATION.

Fisheries, Ontario.....	\$13,185 76
do Quebec	12,909 66
do Nova Scotia.....	15,127 49
do New Brunswick.....	11,168 53
do Prince Edward Island.....	1,974 70
do British Columbia.....	635 00
do Manitoba.....	250 00
Fish-Breeding.....	24,037 73
Fisheries Protection Steamer.....	17,059 21
Total Expenditure.....	\$96,348 08

W.M. SMITH,
Deputy Minister of Marine, etc.
JOHN TILTON,
Accountant

APPENDIX No. 2

TO THE

REPORT OF THE COMMISSIONER OF FISHERIES

REPORT

— ON —

FISH-BREEDING

IN THE

DOMINION OF CANADA,

1877.

Printed by Order of Parliament.

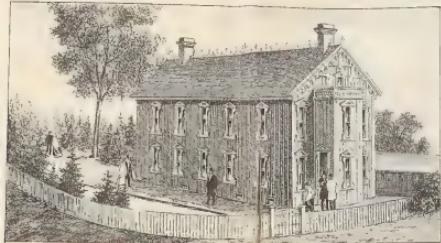


OTTAWA:

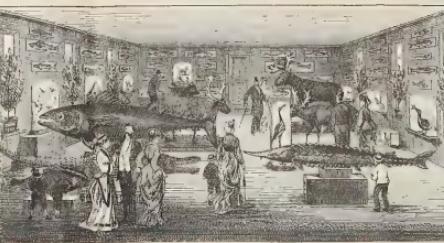
PRINTED BY MACLEAN, ROGER & CO., WELLINGTON STREET.

1878.

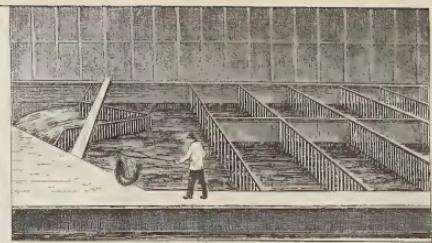




9. OUTSIDE VIEW OF BREEDING-HOUSE.



8. MUSEUM.



8. RECEIVING-HOUSE, PENS, TANKS, &c.



11. DIFFERENT STAGES OF THE EGG DURING THE PROCESS OF HATCHING.



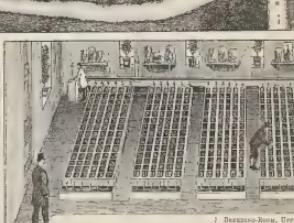
2. GROUND PLAN.



4. BREEDING-ROOM, LOWER PLAT., WITH AQUARIUMS.



10. POND FOR RETAINING FISH AFTER HATCHING.



7. BREEDING-ROOM, UPPER PLAT.



E. TAKING OUT FROM FISH AND IMPREGNATING THEM.



6. HATCHING APPARATUS.



FISH-BREEDING.

R E P O R T

OF

SAMUEL WILMOT, Esquire,

ON THE

Several Fish-Breeding Establishments and Fish-Culture in
Canada, during the Season of 1877.

NEWCASTLE, Ontario, 31st December, 1877.

To the Hon. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

Sir,—I beg to forward to you my Annual Report in connection with the subject of artificial fish-culture as carried on in the Dominion of Canada, under my superintendence and the general control and management of your Department.

The operations during the past year, or season of 1877, have been quite in advance of all former years, both as regards the numbers of young fry that were reared and distributed throughout many sections of the country, and the increased quantities of fish eggs which have been laid down in the several fish-nurseries of the Dominion.

In the report a brief sketch of the transactions at each of the fish-breeding establishments will be given. Appended will also be found, as a more ready means of information, a tabulated statement shewing in detail the numbers of ova laid down, and of fry hatched out in each of the nurseries.

Appended hereto will also be found the reports of the several officers and caretakers, in which the minor details in connection with each establishment will be more fully related.

During last summer, I made my usual annual inspection of the several fish-breeding institutions in the Dominion, now seven in number, in order to obtain a personal knowledge of the exact position they were in, and to increase their general efficiency by the application of improved apparatus; and to give to the several officers in charge such general information in relation to the improved methods of artificial propagation as might be considered best suited to the circumstances of each institution.

REMARKS ON THE SEVERAL FISH-BREEDING ESTABLISHMENTS, IN THE DOMINION OF CANADA.

PROVINCE OF QUEBEC.

TADOUSSAC FISH-BREEDING ESTABLISHMENT.

Here, under the careful management of Mr. Radford, I found every thing in connection with the works in a very satisfactory state; general order prevailed throughout the whole of the institution and the premises connected with it. The requisite supply of parent salmon (280 in number) had been procured, and were disporting themselves in the pond to the delight and satisfaction of every one. They were all large, strong and healthy, and showed no signs of sickness or discomfort from being confined within the circumscribed limits of the small enclosure. The pond or cove which contains them is immediately alongside the hatching-house, and into it the tide ebbs and flows from the sea. This fine collection of fish, together with the imposing salmon nursery at Tadoussac, though situated in a remote section of the Dominion, has, nevertheless, through the numerous tourists who annually visit there, been the means of giving wide spread notoriety to Canada and the United States of the science and practice of the artificial breeding of fish.

The improvements ordered last year had been completed at the time of which I speak, and the various tanks, troughs and other arrangements were very perfect on both floors, both for the utilization of space and for the convenience of labour. Although the building seemed large when first procured, nearly all of its available space was taken up in accommodating the stock of ova obtained during the fall of 1876; and the indications were that the whole area of both floors would be fully covered with eggs in the season of 1877. A new and more perfect dam was in progress of construction across the small stream leading from the little lake, on the mountain side, to the hatchery; this was necessary to prevent any mishap that might occur from breakage, as the old structure had become very much decayed. The upper or fresh water reception pond, together with dams, sluices and dalls, were all in good order. Reference was made last year to the laying down of several thousand California salmon eggs at Tadoussac. These were hatched out most successfully, and the young Pacific salmon were transported safely to the water of the Escoumains River, twenty miles below the Saguenay. This experiment of introducing the Sacramento salmon of the Pacific into the waters of the Atlantic, as a matter of physiology, possesses much interest, and will, no doubt, result in the taking of some of the adult fish in that river during the seasons of 1879 or 1880.

The crop of fry produced at the Tadousac Hatchery last spring was greater than had been anticipated. Mr. Radford reports upward of a million having been planted in several important rivers on the north and south shores of the St. Lawrence.

The following list is given:—

River du Sud, south shore.....	150,000
River Ouelle, south shore.....	150,000
River Du Loup, south shore	60,000
Malbaie River, north shore.....	60,000
River AMars, north shore.....	200,000
St. Jean River, north shore.....	200,000
Petit Saguenay River, north shore.....	60,000
Ste. Marguerite River, noith shore.....	300,000

Shewing a total of.....1,180,000

Some difficulty was experienced in the transportation of this large number of fish, particularly to the points most distant from the breeding establishment, and I desire to suggest a remedy to prevent a recurrence of the slow and dangerous method

adopted in the use of small boats for carrying the fry; this is to employ a small steam tug to perform the work. I am convinced that it would be found to be more speedy, safe, and much more economical. It was the beginning of July last year before all the young fish were got rid of from the Hatchery. At this late season, the weather and the water becoming dangerously warm, losses in transporting them necessarily follow. A small convenient steam tug would perform the whole work of distribution in a few days and without endangering loss, whilst to accomplish the same with small boats takes a month or more, and is always attended with a certainty of more or less death amongst the fry.

The experiment twice alluded to in former reports, of keeping the salmon in the salt water cove until ripe for manipulation, has proved to be not only more healthy for the parent fish during confinement, but has also proved conclusively the fact that their eggs mature equally as well in the salt as in the fresh water, and no difference whatever is noticeable either in the impregnation of the ova, or in the embryonic organism afterwards.

From the 240 parent salmon that were put in the retaining pond, 1,340,000 eggs were laid upon the hatching troughs. These ova, being distributed at the rate of 4,000 on each tray, would more than cover the surface area of the two floors of the building, causing a portion of the troughs to have a double tier of trays. If a second tier were put down throughout, 2,000,000 eggs could be closely accommodated. This would be the utmost capacity that the present arrangements of the building would safely warrant.

It was proposed to send a number of the eggs of the white fish to this establishment, to be hatched out and placed in some of the large interior lakes of that region. But it was unfortunately found that on account of the early closing of the navigation on the Saguenay this could not be done, as the white fish ova were not procurable till nearly the middle of November. A similar difficulty exists with regard to the taking of fry there in the spring, navigation not opening till June, and the white fish are generally hatched out and distributed as early as March and April.

From the many reports received from Mr. Radford, the present large supply of ova are doing remarkably well, and are further advanced than at any similar period in former years; this is caused by the unusually mild winter.

GASPÉ FISH-BREEDING ESTABLISHMENT.

I found this institution in a much more satisfactory condition than it was the year previous, and I also found the officer in charge and the care-taker extremely anxious and willing to exert themselves in making this nursery as complete as all the circumstances in connection with it would possibly warrant. Having taken an inventory of all the appliances in the establishment in like manner as was done at all the others, and after giving instructions concerning many details, I proceeded to examine the two reception ponds with their contents of breeding salmon that had already been placed there. From the unusually great drought which prevailed there last year, the supply of water in the small pond at the hatchery was much reduced, and a few of the early caught fish had perished; those in it at the time of my visit (fifteen in number) were, however, in a healthy and fresh condition and continued so the remainder of the season. This pond is quite too small. A trifling expenditure would increase its area and depth two-fold. The work could be almost wholly performed by Mr. Davis, the care-taker, in his leisure hours during the year. The pond No. 2, which was particularly described in my report of last year, possesses much more convenience for keeping a large quantity of parent fish than the one I have just alluded to. There were in it at the time of my visit fifty-five salmon, most of which were quite clean and healthy. There were, however, a few remarkable exceptions—these were scarred and wounded by the meshes of the nets in which they had become entangled at the time of their capture. A perfect whitish band encircled the body; some of these bands were very narrow, others from one to two inches wide; some were just back of the gills, others near to the large dorsal fin. The wounds at the time of which I speak had become perfectly

healed, showing no signs of byssus or any other fungoid growth, and the fish seemed quite lively and healthy. Great difficulty is experienced every year in procuring a stock of breeding fish for this Hatchery, as the fly-fishing lessees of the rivers entering the basin are unwilling to allow salmon to be taken.

This has been a great disappointment, as at the time of establishing the hatchery at Gaspé I was under the impression that the Dartmouth could be made use of for procuring the necessary supply, and I cannot too strongly urge upon the Government the absolute necessity of having this river set apart for the use of the establishment; and as the lease is about expiring, it could now be secured.

To the officers who accompanied me up the Dartmouth River, I pointed out some improvements with a view to greater safety and strength of the weirs forming the salmon pen. This having been attended to, the enclosure is now a most perfect, safe, and healthy repository for keeping the salmon in.

This pond has a large supply of cold, limpid water, is overhung with shrubs and trees, and is easy of access by means of boat or scow to the Dartmouth River, which is but a short distance off, and it forms a safe retreat for the fish until they become ripe for spawning.

Upwards of one million of salmon fry were reared, in and distributed from, the Gaspé nursery last season. Mr. Vibert reports their destination as follows:—

Dartmouth River.....	550,000
St. John River.....	313,000
Mal Baie.....	108,000
Grand Pabos.....	80,000

making a grand total of 1,051,000 salmon planted in the most important rivers of that section of the Province of Quebec. Seven hundred and fifty thousand ova were placed in the hatching rills at Gaspé last fall. These were procured from 123 salmon, 70 of which were obtained from the nets on the Dartmouth River, and kept in the ponds of the establishment, and the remaining 53 were captured in the St. John River at the time of spawning.

The decrease in the total number of eggs from last year is accounted for by the refusal of the lessees, as above stated. These 750,000 ova, from latest reports, were looking well, and promised a large percentage of fry. In the Appendix will be found the details of operations at Gaspé, given by the officer in charge.

RESTIGOUCHE FISH-BREEDING ESTABLISHMENT.

The breeding-house here being the first institution of the kind that was built in the Lower Provinces, has become somewhat dilapidated. It was put up in a much ruder state than those which have been erected since. It was constructed of flattened cedar timbers roughly put together and placed alongside a high bank—one side of which was excavated for this purpose—the object being at that time to obtain as much shelter from cold as possible in that inclement section of the country. The action of the frost and the outward inclination of the steep bank, has thrown one side of the building off the perpendicular. To avoid further pressure, stays or braces are used which destroy the arrangements and convenience of the breeding-room inside, and also take up much space which is now absolutely needed for the necessary accommodation of the increased numbers of ova which are being procured at that place. It would be useless to add much expense to the present building; but in view of the extensive and important salmon fisheries at the head of the Bay des Chaleurs, which obtain their supplies from the Restigouche, together with the large fisheries in the estuary of that river, it will be found necessary that an establishment possessing greater capacity and convenience should be erected there at an early date. The whole of the available space of the building for hatching purposes was occupied last autumn with eggs, and from the practical experience which Mr. Mowat, the officer in charge, has now obtained both in the procuring of parent salmon and in the care of the eggs and distribution of fry, it is important that this knowledge should be fully utilized in procuring largely increased supplies of young

salmon from this valuable stand-point, thereby augmenting the very extensive and almost unlimited tidal fisheries below. I would therefore suggest to your Department the propriety of taking into consideration the importance of carrying out these views in the erection of more extensive and convenient works on the Restigouche River.

At the time of my visit to this river last summer, a very eligible site was chosen for a receiving pond for the safe keeping of parent salmon until they become mature for spawning in the autumn. The spot selected was at the famous Indian House Pool, where a very cold stream of pure water enters the main river. At this point Mr. Mowat was instructed by your Department to erect a dam and form a commodious pond for the purpose above mentioned. The work, as reported by that officer, has been performed, but was not available for last season's operation, as the salmon had passed up river before the nets were procured for capturing the fish. Mr. Mowat reports that with some small repairs the structure will be in readiness for the coming season's work.

From the Restigouche establishment last season, 600,000 salmon fry were produced and distributed in several of the neighbouring rivers, and the total number turned out from that institution has been 1,820,000. The following rivers have obtained their quota of this distribution, namely the Metapediae, Upsalquitche, Jacquet, Nouvelle, Little River and the main Restigouche.

The quantity of ova secured and put on the hatching trays last autumn, amounted to 1,204,000 ; of this number 200,000 were sent to the Miramichi Nursery. From the latest accounts received from the Restigouche, a very trifling percentage of the ova have died, and the pleasing prospects are reported that the yield of fry there next spring will be most satisfactory. In the Appendix will be found a Report in detail by the officer in charge of the Restigouche establishment.

PROVINCE OF NOVA SCOTIA.

BEDFORD BASIN FISH-BREEDING ESTABLISHMENTS.

This salmon hatchery was, upon inspection, found to be in first-class working order ; the apparatus of every description was in good condition, and the building itself was cleanly and orderly throughout. Some improvements and alterations in the breeding rooms were ordered, by which the space would be increased for laying down more eggs the coming autumn. The appliances introduced here from the first were of a superior kind to those used at the older constructed establishments, and the knowledge gained from experience at the other hatcheries was applied in the building and getting up of this one.

In this salmon nursery, perforated earthenware trays are principally used for the laying down of the eggs and hatching out of the fry ; they are more cumbrous and not so easily handled as the more lightly constructed perforated zinc and wire cloth ones used at the other establishments. These earthen trays were introduced by the officer in charge to overcome, as was alleged by him, the injurious effects from some chemical action of sedimentary matter in the water upon the metal tray. The earthen trays, however, are not found to be any more successful in the hatching of the fry at Bedford than the metal ones have proved to be at all of the other establishments. Filters filled with small gravel are also used here, through which the water is made to percolate before flowing through the breeding-troughs. This means of cleansing the water from sediment has not yet been adopted at any other places ; should experience prove that the benefits derived from these filters are commensurately greater than their cost of construction and attendance, and taking into consideration the necessarily reduced flow of water which must pass through them, then it would be advisable to introduce them elsewhere. It is inexpedient to give additional intricacy or labour, or means of expense than is actually necessary in the working of these fish-breeding establishments.

The operations at the Bedford hatchery last year were very satisfactory. A million of fry were reared in it, and transported to more than thirty rivers of the Province of Nova Scotia.

360,000	were put into the waters of Halifax County.
40,000	in Hants County.
40,000	in King's "
165,000	in Cumberland "
50,000	in Annapolis "
130,000	in Colchester "
170,000	in Pictou "
20,000	in Lunenburg "
20,000	in Guysboro' "

Some losses and considerable difficulty were occasioned in carrying fry to very remote places from this establishment. This system of carrying, or rather trying to carry, young fry to distant points (particularly where no speedy means of travel as by railway is to be found) should be discontinued, because the time spent (almost invariably) in fruitless journeys of this kind could be so much better, and more profitably, applied at nearer points, where the safety of the young salmon in their carriage could be relied upon. The better way to achieve the object sought for would be to erect additional nurseries within such a radius of country as would insure safety in the transportation of the fry within its limits.

The success attending the collecting of ova for the Bedford nursery was extremely good; 1,650,000 eggs are reported to have been gathered; of these 200,000 were despatched to the Miramichi hatchery by orders from your Department. The balance, or 1,450,000, were put on the hatchery trays at Bedford. The latest reports concerning this very satisfactory supply of eggs were that the losses were trifling and that the embryo were distinctly noticeable in them.

Several improvements are asked for by the person in charge of this establishment, but the main one is a reception pond which is considered necessary for the safe-keeping of the parent salmon until they become mature for spawning. In my report of last year attention was drawn to this, with a recommendation for the construction of a reservoir just alongside the building, into which the salmon might be induced to enter from a fish-pass to be placed in the main river.

Previous to this season doubts existed as to whether any considerable number of salmon yet passed up the Sackville River. These fears have been overcome by the taking of several salmon last fall in a rudely constructed trap arranged at the dam just above the works. No positive knowledge is given of the number that ascended the river, but the officer is of the opinion that, with the necessary appliance for capturing and safely keeping them, a sufficient number might be procured in this way to stock the establishment with eggs, or to such an extent as to reduce very largely the expenditure now incurred in gathering the ova at the Musquodoboit and Philip Rivers, and at other distant points. It would be erroneous to conclude that a reservoir as stated above would be sufficient for the retaining of any large number of salmon for any length of time during the early part of the season, because the limited space where it would be necessary to construct it would not permit of the pond having sufficient area surface or depth to admit of all the freedom requisite for salmon to throw off fungoid growth or prevent the hardening of the ovaries which is invariably a consequence with the migratory fish when prevented from enjoying highly aerated water, or when enclosed in too limited bounds. But as it is found that the salmon do not enter the Sackville until they are just ready to deposit their eggs, the reservoir would not be as objectionable from the causes above mentioned; but, on the contrary, would be well adapted for the retention of these late spawning fish. A very satisfactory report of the operations at the Bedford Salmon Hatchery will be found in the Appendix hereto attached.

PROVINCE OF NEW BRUNSWICK.

MIRAMICHI FISH-BREEDING ESTABLISHMENT.

This fish-breeding establishment was visited and inspected by me in the beginning of the month of August last by your special instructions. Upon a close examination of the buildings, ponds, apparatus and other appliances, all were found to be in good repair, and in good working condition. As difficulties and losses had taken place here during former years, I took special care to investigate closely everything in connection with the premises, with a view to putting the institution upon such a basis as would warrant success for the coming season. In order to secure this end, independent of my own knowledge and judgment, I consulted with Mr. Shasegreen the caretaker, to learn his views with regard to any changes or alterations he might deem necessary, and in his opinion no further improvements, except those of a very trivial nature, were actually required. Nevertheless, I instructed him to make arrangements for an additional plank to be placed at the upper dam to keep up the supply in the event of any lowering of the water taking place in the main stream; to rearrange the entrance to the conducting pipes in order to prevent the possibility of their choking up during winter; to stop any leakage that might be found where the underground pipes were formerly united; and to put such labour upon the dams as he deemed necessary to prevent the possibility of breakage. Other matters of detail in work were ordered to be done, such as varnishing the breeding trays and hatching troughs, and painting the floor of the large room.

Expecting, then, that the institution in all probability would be placed under my control for the approaching season, I took more than ordinary pains in shewing to Mr. Shasegreen the precise manner in which all work was to be done, and explaining the arrangements that were originally made for the convenience and easy accomplishment of it. The scow which had been fitted up expressly for the safe conveyance of the salmon from the river to the pond was minutely examined and the method of working it was fully explained. The use and adaptability of the large mill pond for the safe keeping of the parent fish was referred to particularly; and the express object for which the small reception house had been built with its weirs and pens was pointed out, as well as the plan to be adopted for driving a flood of water through it by letting off the upper dam, in order to entice the salmon to enter the house from the large pond below. Another method by which the mature salmon could be easily and safely captured without injury to them, was shown by which they could be netted when in the act of spawning on the short gravelly bottomed part of the stream between the reception house and the still quiet water of the large mill pond. (See plan attached.) Having given to Mr. Shasegreen every detail that was necessary for the perfect working of the nursery, and considering that his three years previous employment there would have also strengthened his own judgment in these matters, I proceeded up the Miramichi River in company with Overseer Hogan of Newcastle, with the object of selecting some desirable point in the river at the head of the tideway where a large seine, previously ordered, might be conveniently used for the capture of spawning fish during the following September and October. From there, salmon when taken, should be quickly conveyed in the scow referred to down the river to the large pond at the hatchery.

A point at the large bridge just at the confluence of the Little South West River and the Miramichi, was considered well adapted for netting the salmon, and no difficulty was apprehended by us in getting the requisite supply during the time when the "last run" of fish were usually known to pass up, either here or at the rapids a short distance above. Mr. Hogan's usual sagacity, added to his long and intimate practical knowledge of the river, and the experience he possessed in catching the fish in former years, together with my own personal experience in capturing a large number in the river in 1873, fully satisfied me that the accomplishment of this part of the work in connection with the approaching seasons' operation at the Miramichi nursery would be safe and easy.

Of the 610,000 ova that were said to have been laid down in the fall of 1876, only 320,000 fry were reported by Mr. Venning to have been hatched out and planted in the following rivers of the Province of New Brunswick:—

North-west Miramichi.....	50,000
South-west ".....	50,000
Little South west.....	50,000
Sevogle.....	20,000
Bartibog.....	20,000
Burnt Church.....	20,000
Tabusintac.....	20,000
Napan	15,000
Black.....	15,000
Richibucto.....	10,000
Salmon	10,000
Canaan.....	10,000
Shediac.....	15,000
Hopewell	15,000
<hr/>	
	320,000

The proportion of fry hatched from the number of eggs laid down was unusually small; the great percentage of loss being accounted for by the persons in charge stating that sedementary matter of an injurious nature settled upon the eggs and destroyed them. A special report concerning this loss, after an investigation made by me, was forwarded to your Department in July last.

A number of parent salmon was caught in September and October in the Miramichi River, sufficient to fill the nursery troughs with upwards of a million of eggs. These fish were taken under the management of Overseer Hogan, and were floated down the river principally in small crate-like boxes. Of the 374 salmon that were delivered at the breeding-house, ova were obtained from 76 females only, with an average of a trifle over 4,000 each, or a total of 310,000 eggs. The cause assigned by Mr. Shasegreen for this very small number of eggs in proportion to the large number of salmon captured, was that many of the fish *sickened and died* from the effects of a skin disease, or fungoid growth upon their bodies, and that the eggs in the bodies of many of the fish became so *hardened* that it was considered necessary to liberate them ; and also, that a very large proportion of the fish were found to be *males*. Immediately upon being informed of the above loss, I proceeded to the Miramichi, and made an examination into the causes of the misfortunes, the particulars of which are given in my letter of 4th February, 1878, forwarded to your Department, treating specially upon this subject. In addition to the supply of eggs procured at Miramichi, a number were transferred, by order of your Department, from the Bedford and Restigouche nurseries, where large stocks had been obtained. From each of the latter 200,000 were removed, giving a grand total of 710,000 salmon eggs in the former establishment. These, from very frequent accounts received of late from Mr. Shasegreen, are, with few exceptions, in a very healthy and prosperous condition, and far advanced in their development.

A sketch or plan of the Miramichi grounds, with buildings and ponds, is here given.

REMARKS ON THE COMPARATIVE NUMBER OF OVA SUPPLIED BY FEMALE SALMON.

The following statement on comparative numbers of ova obtained from salmon to supply the several breeding establishments in the Maritime Provinces will be found interesting and instructive to persons engaged in fish culture. The figures are calculated from the returns sent in by the officers in charge of the several establishments and are as follows, namely :

Bedford Nursery, 180 females, averaged.....	9,170 eggs
Miramichi " 76 " "	4,080 "
Restigouche " 87 " "	23,840 "
Gaspé " 60 " "	12,500 "
Tadoussac " 125 " "	10,700 "

A few instances will be given also of the great fecundity of female salmon. Two were taken in the River Philip, in Nova Scotia, weighing each over thirty-five pounds, and giving respectively 20,000 and 25,000 eggs. Three females captured in the River Restigouche, in New Brunswick, yielded individually 25,000, 27,000 and 28,000 ova. An opinion has hitherto prevailed amongst writers on the nature of salmon with regard to the prolific powers of the females, that they yield a greater number of eggs than the facts would warrant. Statements published by them make one thousand eggs as the average for every pound weight of the parent fish; thus, a twenty-pound fish would give twenty thousand, a ten-pound salmon ten thousand, and so on. This quantity I have found, after repeated trials, to be nearly double the actual amount to be obtained. Having made this statement previously I now repeat it, and give the returns of ova taken at the several fish-breeding establishments as strong evidence in favour of my conclusions. The Bedford salmon, which gave 9,000 eggs each, would average, by the former calculation, only nine pounds in weight—this would not exceed one half their actual size. The Miramichi fish would be only four pounds, whilst, in point of fact, ten pounds would be about the average. The Restigouche salmon would be thirteen pounds, whereas the whole catch of the season would weigh twenty pounds. This will also apply to Gaspé and Tadoussac. It will thus be found that *five hundred eggs to a pound of flesh of the female* is about the true statement to count from. Exceptional cases from this rule will however be found with extra large salmon, such as those quoted from the Rivers Philip and Restigouche, where 35 and 37 pounds gave respectively 25,000 and 27,000 eggs.

PROVINCE OF ONTARIO.

SANDWICH FISH-BREEDING ESTABLISHMENT.

This institution, being expressly built for the artificial breeding of the famous "*Coregonus Albus*" or white fish of America, from its location on the flat, level banks of the Detroit River, and absence from other power, is supplied with water by steam; and its arrangements and apparatus, for the hatching of these very small eggs, are of quite a different description from those used in the rearing of salmon and other fry at the other establishments. It was found absolutely necessary, in order to make the artificial rearing of white fish a success both commercially and economically, that immense numbers of the ova should be procured, and that, in the care and management of the millions of eggs requisite to give importance to the work, the labour, anxiety and expense which would necessarily be attendant upon the safety of a similar number of eggs of a larger description, would neither be satisfactory nor remunerative. It has therefore been my study for years past to overcome this serious obstacle in the artificial production of such large numbers of white fish as it would be desirable to raise.

This "Eldorado" in white fish culture has undoubtedly been found in the incubator invented and patented by myself, and now used on a very large scale at the Sandwich nursery. In my report to your Department last year I made mention of this invaluable instrument for hatching the eggs of this fish; but it had not then been so thoroughly and practically tried as it has during the present season. Its method of self-picking and cleansing the eggs is quite perfect, wholly doing away with the ordinary hatching tray or grill, and the labour of hand in picking, feathering, and washing the ova. The officer in charge reports that one man can conveniently take charge of *twenty millions of white fish eggs* by this new process, whereas, by the old method it would require *ten persons* to perform the same work, and even then without equal efficiency or safety to the eggs.

During last season I superintended the fitting up of one-half of the space in the Sandwich Hatchery with this new apparatus; the other half having the old method of hatching on trays, in operation, was not interfered with as time did not permit of it. However, with your sanction, it is my intention to have the entire space of this building fitted up with these new incubators previous to next season's operations.

With this improved system, it will be found that the capacity of the building for breeding purposes will be far more than doubled, and arrangements can be so perfected as to give hatching room for sixty or seventy millions of eggs. This immense quantity of ova could not, under the old methods of propagation, by any possibility be safely taken care of and handled during the more critical time of their hatching without a daily complement of at least twenty-five or thirty hands, whilst with the improved system the whole work can be very much more satisfactorily and perfectly done with the labour of about three intelligent men. This improved labour-saving incubator speaks volumes for itself, not only in the economy of room and labour, and consequent saving of expense, but it also effects for a certainty greater cleanliness and safety to the eggs by its own action of carrying off the bad ova with all the sediment and other impurities that may be contained in the water. A very great drawback to full success in the artificial propagation of whitefish on a very extensive scale has been the unavoidable losses and the killing of large quantities of ova while in the act of picking out the bad eggs from the good ones and in cleansing them from injurious sedimentary matter which is always found in large moveable bodies of water.

The Detroit River exemplifies this fact in relation to sedimentary deposits very strongly. Though to outward appearances it would indicate purity, it is, nevertheless, at times very largely filled with earthy and decomposed vegetable matter. This injurious fungoid-producing substance, being in the lakes above, and storm-stirred to the surface, is brought down by the strong current of the river in the most inconceivable quantities. These extremely minute spores permeate through every description of screen through which water will pass, and lodging upon the egg, when in a quiet state on the ordinary hatching tray, commences its insidious byssus-like growth which, unless quickly removed by the process (known in fish culture) of feathering and washing, soon grasps in its poisonous meshes the adjoining eggs and produces deadly havoc amongst them.

The fatal effects and noxious growth of fungi amongst the whitefish eggs is wholly overcome by the gentle but constant upward rolling action of the ova, caused by this improved fish incubator, which prevents the possibility of the accumulation of any matter upon their surface; but by the upward flow of water through the mass of ova in the apparatus, these spores, with all unsound eggs and other impurities, are carried off.

It is to be regretted that, through the selfishness and cupidity of the fishermen along the Detroit River, an invaluable fishery, formerly stored with incalculable wealth, should now have become, comparatively speaking, almost destroyed by the unnatural slaughter of immense numbers of breeding whitefish that frequented it. This result, disastrous as it is, not only to themselves but to the country at large, on account of the great commercial decrease in the traffic of this valuable fish, has been brought about wholly by excessive fishing during the period in which the whitefish are migrating up the river for the express purpose of spawning. The fatal consequences, now apparent by the very great falling off in numbers and in the hitherto prosperous traffic in this fish by this immoderate mode of fishing has, by a most solicitous effort on the part of your Department, been attempted to be arrested by the introduction of the artificial method of propagation in that section of the country. With the view of carrying out this object extensively, and thereby benefitting the fishermen in that locality particularly, and the inhabitants generally, a fish-breeding establishment, unequalled on this continent for its capacity and its appliances for the work, has been erected upon the Detroit River. Many millions of young fry have already been reared in this establishment, and at the present time a stock of twenty millions and upwards of vitalized eggs are in progress of hatching out. Yet, it is

lamentable in the extreme to be compelled to state that, with the prevalence of that selfishness and cupidity which almost brought about the annihilation of the fish in this river, it is with extreme difficulty that assistance or even permission can be obtained from some of these fishermen for procuring the requisite supply of ova for this institution, which was erected at a large public expense, and the benefits of which must of a necessity be more immediately and directly felt by these very fishermen themselves. Should this same avaricious and niggardly disposition be continued, and should no means be instituted by which this feeling can be thwarted and overcome, then it will be useless for your Department to continue the necessary public expenditure for the maintenance of an institution in a locality and for a people who, by their own acts, are showing themselves utterly unworthy of it.

If it be deemed necessary that the Sandwich Institution should be worked up to its full capacity during the next year, timely arrangements should be prepared by which fully sixty millions of whitefish eggs could be obtained. In order to secure this not unnecessary supply, a large number of parent fish will be required. From pretty accurate calculations, which have been made, it has been found that 500 ova are obtained from every ounce weight of the body of the female fish. Taking a low estimated average weight of a whitefish ova to be one and a half pounds or 24 ounces, the product will be 12,000 eggs. It will be found, at times, that twenty, and even thirty thousand eggs can be secured from one adult fish, yet the estimate of 12,000 should be taken, in order to cover all emergencies. Taking this calculation as data, 5,000 females and a corresponding number of males, in all 10,000 parent fish, would be necessary to stock with certainty the Sandwich nursery.

Now it is just as well that the vital importance of this work to the fishermen and to the country at large should be clearly understood—the natural qualities of these 10,000 spawning fish, unless utilized by the artificial process, would be wholly lost, as the eggs from these fish (which latter are taken to the markets of the country for consumption) are, in the process of preparing the fish for culinary purposes, cast away, whilst by the process of fish-culture referred to, they can be utilized by the method of artificial impregnation, and be made to produce at least forty millions of living fry to be turned out to replenish the same waters which Providence first intended should be the case.

The fry thus artificially produced, when turned into the river, are carried down by the current to the broad expanse of the lake, where they find food congenial to their nature, and in process of time (about three years) become adult fish and are instinctively compelled to seek the same spawning grounds for re-production, where the parent fish from which they were taken had previously resorted to. Is it not then self-convincing to every intelligent mind, that the system of artificial propagation is not only reasonably feasible, but is also attended with great local and national importance, and that it also forms a practical sudsidy for upholding a source of wealth. But, by the greed and avarice of the fishermen, the waters of that section of the country have almost been depleted of a valuable source of food and commerce.

This selfishness is shewn to such an extent that these fishermen, notwithstanding the benefits which are so clearly to be derived by them by the artificial cultivation of the whitefish, actually deny the liberty or the right of taking the ova for this object from the fish which are netted by them, and under the many pretexts which they make, they not only throw obstacles in the way of, but also prevent the employés of the breeding establishment from obtaining ova within a short distance of the works, thereby compelling them to make long, expensive, and very often fruitless, journeys to purchase supplies. On account of these difficulties and drawbacks, this hatchery has never yet been supplied with its necessary quota of ova; but now, with the improvements and labour-saving facilities for more extensive operations, the inconsistency of the fishermen will be even more severely felt.

In conversation with one of the principal fishermen, and one who is also a large dealer in the fish trade at Sandwich, I learned that the probable catch of whitefish on the Canadian side of the Detroit River, during last fall, would be about 170,000.

They were caught in the following places, namely:—

Bois Blanc Island.....	20,000
Turkey "	10,000
Fighting "	80,000
Peach "	14,000
Petite Côte Fishery.....	46,000
	170,000

Assuming that one-half of these (85,000) would be females, and that each fish would yield the very low average of 10,000 eggs the result would be that 850,000,000 of ova were totally lost to the river for re-productive purposes. This very large drain upon the natural supply of whitefish eggs, has been going on (only upon a much more extended scale) for a great number of years, and this has brought about the wonderfully great falling off in the number of whitefish at the present time.

As the number of breeding fish have become so very much lessened, and the nets and other engines for their destruction have become more numerous, and greatly improved,—add to this the increased desire amongst the fishermen to capture them in order to secure the highest prices in the markets (which these fish from their scarcity now bring), we must feel convinced that, ere long, the whitefish will be wholly exterminated from the Detroit River, and will soon be considered only as a luxury of the past, unless there be some compulsory measures instituted by which a certain portion of the ova contained in them might be saved; some regulations by which the fishermen themselves should be compelled (or be made to assist others) to gather such quantities of ripe ova as could be obtained from the parent fish, immediately when taken from the nets, and before they are forwarded to the markets.

It must be held that it is very necessary to preserve the whitefish (such a valuable source of food and riches to the country) from total destruction, and that the most pressing need is now demanded, by which their numbers, reduced as they are, shall at least be sustained—no matter whether it may or may not affect the interests of those engaged in their traffic, for it must be deemed more wise to preserve to the future this natural product of the water than to allow the mercenary desires of a few, at the present time, to exterminate it.

This national calamity has already been too truly experienced in the almost total destruction of the whitefish in Lake Ontario; it is rapidly reaching the same point in Lake Erie, and ere long the same misfortune will extend to the larger waters of Huron and Superior, and, in time, will cover those of the newly formed Provinces of the far west.

In almost every civilized country, laws have been instituted to prevent traffic in the flesh of pregnant animals. This wise provision implies the preservation of the creature itself for re-productive purposes, and the prevention of its use for food, which is at this time of an unclean and unwholesome nature. Why, then, should gravid fish be made an exception to this statutory principle, when it is well understood that, independent of their being unfit and unwholesome for food, the rapid extermination of their species is also being hastened?

I would now desire to describe to you the method adopted, last November, for procuring the ova that were laid down in the Sandwich nursery, in order that you may readily comprehend the *modus operandi* by which, to a certain extent, the artificial method of propagation was applied in preventing the rapid extermination of these valuable fish, and to avert from total destruction a certain percentage of the millions of eggs that were being barbarously cast away. Instructions were given to Mr. Nevin, the officer placed in charge of the establishment, to be in readiness with such persons as he could entrust with the work, and to watch the opportunity when the fishermen would be engaged in hauling in the nets in the river, or when taking the fish from the pens; and as they were being counted out to be carried to the market, to gather the eggs from those that were found ripe for spawning. The manner of performing this work was as follows: One person would pick

out a female in the act of being cast into the waggon or boat, and with gentle pressure of the hand down the abdomen, the eggs, if ripe, would flow freely from the fish into a pan or other vessel previously arranged for this purpose. Another assistant would perform a similar work by expressing the milt from the male fish into the same pan. The eggs and the fluid coming in close contact, by careful stirring about with the hand, generally caused impregnation of the ova. They were then cleansed from all impurities by washing, and as quickly afterwards as possible carried in pails to the hatching house. Here the eggs were measured out with small cups containing a certain number each, and either put into the patent incubators holding 100,000, or spread upon the ordinary wire cloth trays containing 10,000 each. With the former the eggs are at once set in motion by letting in water by means of a tap, and the process of self-picking and self-cleansing goes steadily on; with the latter a number of boys are immediately employed to pick out the bad eggs with small wooden pincers, and to wash off impurities with brushes or feathers. By this process it has been found, when care and attention is given to the work, and when reasonable time and assistance is granted by the fishermen for the employes of the nursery to select the proper ripe fish at the time of netting them, that from fifty to eighty per cent. of the ova can be made to yield living fry. These usually hatch out in March and April, and are at once allowed to pass into the Detroit River, the strong current of which carries them quickly into Lake Erie, to replace in part the total loss of the eggs, which otherwise must have been the case had not this means been adopted to save them.

The engine, pumps and other appliances which form the motive power by which the whole establishment is furnished with water, have performed the work remarkably well; the machinery and apparatus used in hatching the eggs are in good working order and repair. It has been found that the use of good sound hardwood is more economical and better adapted for running the engine than coal. I have, therefore, to advise the purchase of a sufficient supply of good cordwood for next season's operations; this should be delivered at the establishment during next summer. A good substantial boat is an indispensable requisite to the place in the collection of ova from different points on the river; considerable expense was necessarily incurred in hiring one last fall. It would answer a two-fold purpose; when not in actual employ at the fishery, it could be used for purposes in connection with the inspection of that district by the local fishery overseer.

In contemplation of working up the full capacity of the hatchery next season, which, by the introduction of the new apparatus has been nearly doubled, it will be necessary to increase the supply of water now used. This can be readily done by laying down another underground pipe from the building to the river. This conductor should be made sufficiently large to allow an abundant flow of water into the building. In this way a large amount of steam power would be saved, which is now used in forcing the water from the river through a pipe of too small dimensions. It is necessary that this improvement should be made early next spring. The number of whitefish fry reared at the Sandwich nursery last season amounted to 7,750,000; they were hatched out during last March and April, and turned into the Detroit River. The anxiety of mind experienced in the perplexity attached to the rearing of this immense number of minims was very great, the result, however, was somewhat compensating, from the fact that in the hatching and distribution of them the losses were only of small account.

The quantity of ova laid down in this hatchery the past season, or fall of 1877, was very satisfactory, being more than double that of any previous year. The officer in charge reports the gross amount gathered at 31,000,000; of these, some 5,000,000 proved to be unripe and worthless, the balance of 26,000,000 were deposited in the different kinds of hatching apparatus in the establishment; 22,000,000 of these have been saved, and are now doing remarkably well, being in an advanced stage towards hatching out, with life and motion plainly noticeable in them. The fry will emerge from these eggs about the latter end of March next, and will be ready for general distribution almost immediately afterwards. Appended hereto will be found a

report of operations at Sandwich by Mr. Nevin, my assistant in charge. This officer has performed the very important and onerous duties devolving upon him in connection with this extensive fish-breeding establishment in the most trustworthy and satisfactory manner.

NEWCASTLE FISH-BREEDING ESTABLISHMENT.

In the Report of last year, a particular description was given of the improvements that had been made in the enlargement of this building, and the increased capacity thereby obtained for the laying down of fish eggs. Nothing of an important nature has been required to add to the completeness of the arrangements in connection with the hatchery itself, but it was found necessary to lay down a conductor-pipe of larger dimensions than the former one. The more extended area for hatching purposes, and the increased number of breeding troughs on both flats of the building, necessarily required an additional supply of water. It may not be out of place, however, to make some reference to the peculiar qualities of the stream upon which this fish nursery has been erected, for it is very doubtful indeed whether it would be considered by the generality of those who are engaged in the artificial propagation of fish to be well adapted or at all suitable for the work; and there is no doubt, so far as purity and high temperature of water is concerned, the Newcastle salmon hatchery labours under more serious disadvantages than any other fish-breeding establishment on this continent. At the first inception of the work of salmon breeding here, little if anything at all, was known in relation to it in America. The idea entertained by the originator of the novel undertaking was that, as the creek was known to be formerly a salmon-breeding stream, naturally, no special reason could be well given why these fish could not be reared in it artificially. This latter view of the matter has been most practically and satisfactorily demonstrated. The stream in question had, however, became thoroughly changed from its normal state, when salmon in the olden times so largely inhabited it for spawning purposes. Then it was amply supplied with a flow of fine, cold, limpid water; the forest, from the source of the stream, all the way to its outlet into the lake, was in its primeval state, overshadowing it from the sun's rays and influences. This, with the multitude of springs of icy cold water oozing out here and there, and little rills trickling along the ever-shaded surface of the earth, together with the constantly splashing current against logs and fallen trees, gave both aeration and hiding places innumerable for the fish. These obstacles and brushwood also prevented the gravelly beds in the stream from being shifted or carried away by the force of freshets. All these were nature's provisions for assisting these migratory fishes in the reproduction of their species. But now the forest has all disappeared by the labour of the husbandman, laying bare the face of the country to the rays of the sun and general influences of the atmosphere, which by the process of absorption and evaporation have almost wholly dried up the numerous springs and rills, which were the original feeders of the creek. This has also diminished the flow of water fully one-half, and increased its temperature to such an extent during the spring and summer months as to create enormous quantities of infinitesimal spores for growth of fungi and other deleterious matter.

In addition to the above must be mentioned the ungovernable force and destructive consequences of immense freshets that frequently prevail, rushing down the now unimpeded course of the stream, carrying away previously formed spawning grounds, sweeping along with its violence the offscourings from lately ploughed fields, and from turnpike roads, together with rotten vegetable substances from barn yards, compost heaps and other depositaries of foul matter, and the refuse from saw mills and other manufactures erected upon the stream. This turbid and dangerous state of the water in this stream (and it is the same in all others in the populous parts of the country) invariably takes place just previous to, or immediately at, the critical time in the spring of the year when the fry are emerging from the eggs, and the difficulties referred to cannot be overcome, cannot be even ameliorated in the course of natural reproduction. And although the difficulties and damages resulting therefrom can be overcome by the artificial methods of propagation, nevertheless the operation

is attended with much labour and anxiety, for in this state of the water, lasting a fortnight or more at a time, cleansing, by means of filtration, is found to be quite impossible. The foul particles of sediment permeate everywhere, covering the eggs at times during the course of a few hours, to the depth of half an inch with a muddy mixture of putrid earthy and vegetable matter; this insidious substance clings to the eggs with great tenacity and cannot be removed except by means of artificial cleansing. These and other causes, which neither time nor space will admit of entering into here fully, had well nigh exterminated the salmon from the waters of Ontario. But the object of mentioning in detail some of the difficulties which do prevail, and which go towards the reduction as well as destruction of the better kinds of food fishes natural to the streams and lakes of the country, is to show that, even with the many besetting drawbacks which must necessarily arise from the carrying on of various industries and from the changed state of nature in many ways in the country, a remedy to a certain extent has been instituted through the instrumentality of your Department, in the selection upon this stream of a well-timed and commodious artificial fish-breeding establishment.

This institution has already inaugurated a new industry in the Dominion, and has practically demonstrated the feasibility of a science for overcoming many of the inevitable disadvantages referred to in the fact of having reared and distributed many millions of salmon fry, and of other valuable kinds of fish, and also of introducing the salmon of the Pacific Ocean into the waters of Ontario. From the many practical experiments which have originated from this establishment in the perfecting of machinery and apparatus to simplify and economise labour and expense in the carrying out of this enterprise, a systematization of the methods of propagating fish by artificial means has been widely extended, not only in the several Provinces of the Dominion of Canada, but throughout the whole of America.

The results in connection with the ova that were laid down in the Newcastle Nursery last season (1876) were of a satisfactory nature. The crop of young fry was very good; they were distributed principally in Ontario, some were sent to the Province of Quebec; quite a number of the ova, when well advanced, were forwarded to the Fishery Commissioners of several of the States of the Union, and others were sent to England. The particular destination of the fry and of the eggs will be found as follows, namely:—

Name of Person or Place Where Sent.	Salmon.	Trout.	Whitefish.
North River, Quebec.....	10,000	.....	.....
Magog do do	10,000	2,000	.....
Trent do Ontario.....	40,000	.....	.....
Rouge do do	10,000	.....	.....
Humber do do	20,000	.....	.....
Credit do do	20,000	.....	.....
Saugeen do do	40,000	.....	.....
Grafton Creek do	20,400	.....	.....
Barber's do do	40,000	.....	.....
Duffin's do do	20,000	.....	.....
Lynds' do do	10,000	.....	.....
Baldwin do do	980,000	10,000	.....
Ontario Lake do	10,000	10,000	150,000
Balsam do do	10,000	.....	.....
Clear do do	10,000	.....	10,000
Sandy do do	5,000	.....	.....
Gull do do	10,000	.....	.....
Lord Exeter, England	5,000	2,000	30,000
Prof. Buckland, per A. Begg, Esq., England	5,000	.....	.....
Prof. Baird, United States Commissioner, United States	6,000	.....	.....
New York Aquarium, United States	4,000	.....	.....
Wisconsin State, United States	5,000	.....	.....
Iowa State, United States	5,000	.....	.....
Seth Green, Esq., United States	5,000	.....	.....
B. Lett, Esq., Ontario.....	.....	.....	10,000
Total	1,300,000	24,000	200,000

The above table shows a grand total of *one million five hundred and twenty four thousand* fry and ova, distributed from the Newcastle Hatching-house, during 1877.

In performing this unusually critical and painstaking work, covering such a wide extent of country, a great deal of anxious consideration was felt for the safety in the transportation of the young fish; as the month of June and July is sometimes reached before the whole work is completed, the extreme heat of the weather prevailing then doubly enhanced the precariousness of the labour. But, notwithstanding all this, the persons engaged in carrying out this venturesome duty, reported most satisfactory results.

Of the complement of California salmon eggs, received from Prof. Baird, in the fall of 1876, eight thousand in number, one half were forwarded to the Tadoussac establishment, the balance were retained here. These did unusually well, having hatched out without any losses worth mentioning, and the fry, after retaining a large portion for this stream, were planted in several places throughout Ontario; quite a number were put in the Saugeen River. I have again to repeat my experience with regard to these fish as being much more rapid in their growth, and apparently better adapted to the high temperature of water now prevailing in our streams than the native salmon of the country. Another consignment of forty thousand of the California eggs were received at this establishment in October last. They were sent through the courtesy of Prof. Baird, Commissioner of Fisheries for the United States, and arrived here in splendid condition; not exceeding one hundred bad eggs were taken from the lot at the time of unpacking. These ova were despatched from the United States Government Fish-breeding establishment, on the McLeod River, a branch of the great Sacramento, on the Pacific Coast. They were forwarded in a refrigerator car of the Pacific Railway across the continent to Chicago, along with some millions of others, for several States Commissioners in the Union, and for public establishments in Europe. At Chicago, the several consignments of ova were transferred from the refrigerator car to others, and expressed to their destinations, where, with but very few exceptions, they arrived in the same sound condition as those received at this Nursery.

Misfortune, however, befel the second lot of eighty thousand that were sent at a much later period, and by another mode of shipment. An application for half a million eggs had been made through your Department to Prof. Baird early in the season; but, from some unforeseen cause at the McLeod hatchery, only forty thousand, as above related, were sent. With this reduced contingent, Prof. Baird expressed much regret, and being solicitous to supply our wants, kindly ventured the latter shipment of 80,000. These came by ordinary express all the way through, arriving here late in November. They had evidently been placed in some very warm part of the car, as, upon opening out, steam arose from the straw packing, and the contents were found to be uncomfortably warm in handling, yet the ova, to outward appearances, looked remarkably well; but it was noticed that, whilst the eyes and the embryo were particularly visible, neither motion nor vitality of any kind was discernable in the eggs. From previous experience in like cases, the critical position of the contents of this package was keenly felt, and it was evident that extreme caution had to be applied to save them if it were yet possible to do so. Nearly a whole day was spent in reducing the high temperature of the eggs in the crate to the cold standard of the water in which they were to be put. This was done by lightly sprinkling water over the crate at different periods until the proper temperature was reached. They were then carefully removed to the hatching trays, and gently immersed in the breeding troughs. During the whole of this proceeding no evidence of life whatever was given, but a small opaque white line began to show itself transversely in many of the eggs. By the next day this line was strongly shown in almost every one of them; many began to burst open. This continued increasing daily until every egg perished. This disaster was no doubt caused by negligence on the part of the expressmen in placing the crate alongside or near the stove in the cars. They were literally cooked, but retained the outward appearances of health and soundness, for several hours after being taken out of the crate.

Difficulties and losses in connection with the shipment of fish-eggs by express companies, when the journey exceeds two or three days, have proved to be so disastrous (with my experience) that it may be said to be utterly useless to continue this means of transporting them. Yet no injury need necessarily happen during a passage of a fortnight, or even longer periods, should the instructions, which are invariably written upon the package, be carried out. The method of packing has become so perfect, and the eggs themselves have been found to stand even rough handling, so that nothing further is required to ensure safety than to avoid freezing and too much heat. The great secret lies in keeping them *as cold as possible without freezing them*. I have forwarded and received fish-eggs to and from England with perfect safety when they have been given in charge of private individuals, whilst in *every case* they have perished while in the care of the express carriers.

California Salmon.

The experiment of introducing and acclimatizing the salmon of the Pacific coast to the waters on this side of the continent, commenced at this establishment (kindly aided by Professors Baird and Mr. Livingstone Stone of the United States Fishery Commission) has been practically demonstrated by the fact that several of these salmon have been taken in Lake Ontario and in this stream (Wilmot's Creek) during last season.

In October, 1873 the first ova of the California salmon (*Salmo Quinnet*) were brought over from the McLeod River. Twenty thousand of these were donated to this institution by Professor Baird. The eggs arrived safely and were hatched out in the following December. Many of the fry were let loose into this creek in April, 1874. In the fall of 1874, a second lot of these eggs were obtained from the United States hatchery on the McLeod River. The crop of fry from these proved most satisfactory. A large number of the young fish were put in Wilmot's Creek, and at other points in the spring of 1875. A third consignment was received in October, 1875. The fry of these were distributed during the spring of 1876; some in the Saugeen River, others in some of the back lakes, and the balance in the different streams. The fourth quota received in October, 1876, has already been referred to; I will now state that the success attending all these consignments of ova, both in their transportation, their hatching into fry, and their distribution afterwards, was with the one exception of a remarkably satisfactory nature.

The assiduity practised in connection with this interesting venture met its reward in the face of 1876, by the capture of a veritable California salmon in Wilmot's Creek. Publicity was given to this fact, and I here quote an extract from the annual report of 1876 in which mention is made of it. "It is well to make mention here (for it is 'the first record of the kind on this Atlantic side of the continent) that a California salmon was taken last autumn in this creek, in company with his Ontario cousins. This fish, following out the instinct of its species, must have migrated from Lake Ontario (some would say the Atlantic or Pacific Ocean) up this stream, for it was taken out of the trap in the reception house along with other salmon that had entered it. The appearance at once indicated the *salmo quinnet* or California salmon: the length was fifteen inches, the body deep and narrow, with a deeply vermiculated greenish shade on the back inclining to brown towards the belly. The first lot of California eggs received at this place was in the fall of 1874; this salmon must, therefore, have been two years old, from the egg, as it was taken in the month of October last. It was totally unlike the ordinary grilse or smolt of the stream; it was a male fish and had matured milt. The fact of this young Californian being taken here goes to show that it is not requisite that salmon should go to salt water to obtain their growth; and is also evidence in favour of the opinion advanced by me that the *salmo salar* (in like manner as the *salmo quinnet*) can be acclimated to, and also be made natives of, our fresh water lakes."

Further and more convincing proofs of these fish becoming acclimatized to the fresh waters of Ontario is found in the fact of the setting of several of them in July last (1877) in Lake Ontario, near the estuary of Wilmot's Creek; they were captured

along with others of the native salmon of the country. One was a very beautifully developed specimen of upwards of five pounds in weight; its symmetry, though perfect, was different to the native salmon, its body was much deeper, and more of the bass form; its flesh had changed from the deep red of the Pacific salmon to a whitish orange color; it was, however, wonderfully fat and extremely delicious for the table. The skin of this fish was preserved and mounted, and is retained here as an interesting specimen of the first adult *salmo quinnet* taken on this side of the Pacific slope.

Still further evidence is given of their naturalization here and of retaining their instinctive migratory habits, as several of these California salmon returned in September and October last to the hatching-house where they were reared, for the purposes of spawning. All of these were males, and of fair size; one measured twenty-three inches in length. These fish were undoubtedly a portion of the first fry turned out from this nursery in the spring of 1874, and will be found to be the "advanced guard" or forerunners of others of their species that will show themselves next season.

These salmon give interesting data for the naturalist and the study of physiology. They furthermore practically prove statements hitherto advanced by myself, that the salmon of the sea can be acclimatized and made natives of the fresh water lakes, and that it is not indispensably requisite for salmon to go to salt water; large bodies of either salt or fresh water, with an abundant supply of food, is all that is requisite to give them growth and reproducing powers; and that the procreative qualities of the male salmon are usually developed at an earlier stage than the female, the former invariably commence their migration up the rivers for spawning purposes one year in advance of the latter; hence the indisputable fact of grilse taken in rivers being always males.

A large number of eggs were gathered last October and November and placed in the breeding troughs of this nursery. The quantity obtained was not as great as that of the previous year, but this is accounted for by the salmon not coming as far up the stream as usual, and having entered the creek some ten days later than formerly. Seven hundred and fifty thousand ova were gathered by the artificial methods, and are now in a very healthy condition, and are doing remarkably well, and bid fair to yield a satisfactory percentage of fry.

Upwards of a million of the salmon trout eggs were also laid down here; these were gathered from fish caught in the Georgian Bay. The officer deputed to perform this work reported great difficulty in securing ripe eggs. The fish were found to be later in spawning than in former years, and the weather becoming rough and cold retarded the netting of the fish and prevented satisfactory impregnation of the eggs. It has hitherto been found more difficult to gather the ova of the salmon trout and to vitalize them than those of other fishes. The mode of taking the fish and manipulating them in boats on the open lakes, very frequently in rough disagreeable weather, necessarily prevents the requisite care and attention to insure full success. A very large percentage of these eggs, gathered last fall, proved to have been unfertilized.

A number of sea-trout eggs were obtained from the Saguenay district. They are doing very well and are further advanced towards hatching than the ova of the salmon or salmon trout.

A million and a half of the whitefish eggs were laid down here. They were obtained in order to give a thorough and practical test of the new patent incubator. A close personal observation made daily as to the operation of this apparatus, has given the most convincing proofs of its wonderful adaptation and great capacity as a labour-saving and economical means of hatching whitefish ova. These eggs have progressed very satisfactorily and are near hatching.

A small lot of eggs of the English char (*salmo umbla*) were also laid down in this establishment. These, through the kindness of Alexander Begg, Esq., were safely brought across the Atlantic. This gentleman has taken a very deep interest in the

work of fish culture, and through his untiring exertions quite a number of the Canadian fishes have, during the past year, been introduced into English waters.

Three millions three hundred and forty thousand two hundred eggs of the most valuable commercial fishes of the country were placed in the hatching troughs of the Newcastle fish-breeding establishment during the past season, as follows, viz.:—

Salmon (<i>Salmo Wilmotii</i>).....	750,000
California salmon (<i>Salmo Quinnet</i>).....	40,000
Char, English (<i>Salmo Umbla</i>)	200
Sea and speckled trout.....	40,000
Salmon trout.....	1,000,000
Whitefish (<i>Corregonus Albus</i>)	1,500,000
Total.....	3,340,200

The general appearance of salmon in this stream during last autumn was very satisfactory, though the numbers might not have been quite as large as in the previous season. A general disposition was shown, more particularly by the larger sized salmon, to make their spawning beds at lower points in the creek; and so apparent was this, that for some distance above the sluggish part of the stream, near the lake, the whole gravel bed of the creek was completely upturned by their laborious movements in making the beds and laying their eggs. It was not unusual to see a score at a time thus engaged in the broad open day, and so intent were they in this operation that it was with great difficulty that they could be driven off.

The quantity of ova laid in the manner above described must have been very large indeed, and judging from the numbers of salmon seen spawning, the natural deposit of eggs must have been much greater than the supply obtained by the artificial means.

Extracts from the report of Mr. Kerr, Fishery Officer at Hamilton, will be found appended hereto, in which he gives a statement of salmon that were observed spawning in Duffin's Creek, the River Rouge, Lyons' Creek and the Credit River. He further states that several salmon were accidentally caught in several of the fishermen's nets at different points in Lake Ontario. A number of salmon entered the Grafton and Darlington Creeks, but not in such numbers as in the previous year.

Several violations of the law in respect to the killing of salmon, took place on the Trent River, but were punished through the instrumentality of Mr. Charles Gilchrist, Fishery Officer.

One hundred and forty-three salmon were captured in nets set along the shore of Lake Ontario, near Newcastle, and a number were also taken in trap nets set in the lake at Cobourg.

The general progress of the science of fish culture is extending very widely throughout the world. On the continent of America the interest shewn is perhaps greater than elsewhere. Nearly every State in the adjoining Republic is now aiding the work by public grants and by the appointment of Fishery Commissioners, and a very pleasant rivalry exists among the several States as to which shall be most successful in redeeming the waters from previous barrenness, and supplying their populations with an edible food which is so generally prized by the people for its delicacy and wholesomeness. Nor is the Dominion of Canada behind in advancing this important industry of propagating fish by artificial means. This is evidenced by the many establishments now in full operation, which for numbers, capacity and completeness, are not equalled by any other country. This desire to increase and multiply a valuable article of food and commerce is further evinced in the efforts which are being put forth by one of the most distant Provinces of this Dominion, where hitherto it had been considered, from the vast numbers of salmon that migrated up its rivers, that the supply could never be exhausted. With the unlimited demand, and the very great efforts that have been put forth to supply it, the unrestricted slaughter of the salmon in the Fraser River, in British Columbia, is creating considerable alarm, as it is seriously affecting the extensive

traffic in this source of wealth. This feeling has caused a public expression to be given by the people of New Westminster for an application to the Dominion Government for a grant to erect a salmon-breeding establishment upon a large scale, on the Fraser River. This application will no doubt be laid before your Department, and will receive that consideration which its importance demands. A suggestion is, however, here offered : That whilst heartily acquiescing in the wish of the inhabitants of British Columbia in having a salmon-breeding establishment to assist in retaining the stock of fish that at present exists there, it is of equal necessity, also, that a policy for the preservation and protection of fish by setting aside close-seasons for their natural reproduction should be most stringently enforced.

In connection with this now popular enterprise I beg to submit for your approval and publication, a series of pictorial illustrations of the Newcastle fish-breeding establishments with explanatory remarks in relation to each picture.

In conclusion, I beg to draw your attention to the appended table, which shews the statement of vitalized fish eggs at the several establishments in the Dominion, to be thirty millions six hundred and ninety-four thousand ; to this may be added the number of fry which have been distributed from them in former years, amounting to twenty-eight millions five hundred and fifteen thousand, making a grand total of eggs and fry, up to the present time, of *fifty-nine millions two hundred and nine thousand.*

TABLE showing Number of Fry and of Vitalized Ova in the several Fish Nurseries in the Year 1877.

	Fry Distributed in Spring of 1877.			Eggs Laid Down in Fall of 1877.								
	Salmon.	Salmon Trout.	Speckled Trout.	California Salmon.	Whitefish.	Total.	Salmon.	Salmon Trout.	Speckled Trout.	California Salmon.	Whitefish.	Total.
Bedford	1,000,000	.....	.....	.....	.....	1,000,000	1,450,000	.....	.....	.....	.....	1,450,000
Miramichi	320,000	.....	.....	.....	.....	320,000	710,000	.....	.....	.....	.....	710,000
Restigouche	60,000	.....	.....	.....	.....	600,000	1,004,000	.....	.....	.....	.....	1,004,000
Gaspé	1,051,860	.....	.....	.....	.....	1,051,000	756,000	.....	.....	.....	.....	756,000
Tadoussac.	1,180,000	.....	.....	75,000	3,500	1,258,500	1,340,000	.....	100,000	.....	.....	1,440,000
Sandwich. ....	.....	.....	.....	.....	7,750,000	7,750,000	.....	.....	.....	22,000,000	22,000,000	
Newcastle.....	1,300,000	.....	24,000	3,500	200,000	1,527,500	750,000	1,000,000	50,000	40,000	1,500,000	3,310,000
Total	5,451,000	.....	99,000	7,000	7,950,000	13,507,000	6,004,000	1,000,000	150,000	40,000	23,500,000	30,694,000

Pictorial Illustration.

A very general desire now prevails with the people of Canada to encourage by every possible means the artificial method of propagating fish, and also to obtain general information in relation to the *modus operandi* of fish culture. With this view, I beg to submit a series of sketches of the buildings and grounds in connection with the Newcastle establishment, in which are delineated as minutely as possible, by pictorial drawings, the internal arrangements of the breeding-rooms and the apparatus used in the practice of artificial fish-breeding. These pictures will give a comprehensive idea of this national enterprise, from which I trust the public will derive general information and useful knowledge.

The pictorial illustration includes in it eleven drawings, each representing different sketches of the outside premises and grounds, as well as views and plans of the interior arrangements of the buildings, as are more particularly adapted for the work. These drawings will be found numbered from one to eleven for more ready reference.

No. 1 is a panoramic view of the building and grounds, and of the surrounding country. The building on the left of the picture, on the edge of the stream, is the Government fish-breeding establishment, with its long, low reception house alongside; just here a permanent weir or carrier is thrown across the stream, which prevents the upward passage of the salmon. Being thus stopped on their progress up the main channel, they are attracted by the rapid outflow of water coming through the reception house, and rushing up the current they pass through an ingeniously-contrived triangular-shaped weir (No. 3), and become entrapped within the house where they are kept confined till they become ripe for spawning. From this building the stream runs (along the side of the picture) down a distance of some two miles, where it empties into Lake Ontario.

Beneath the two large clumps of evergreen trees, in front of the middle and the main stream, the several nurseries and retaining ponds are shown, dotted here and there with miniature islands. In some of these ponds the parent salmon are retained for a while to recuperate after the exhaustion produced by spawning; others are used as nurseries in which the young fry are kept for a time just after they are hatched out, and have absorbed the umbilical sac.

The small building to the extreme right of the view was the old or original reception house, but it is now used as the gateway and general outlet from the ponds. On the extreme left, just above the main building, is an old mill with its raceway and mill-pond beyond. From the higher elevation of this large reservoir a sufficient head is obtained to force through an underground pipe a large flow of water into the first and second apartments or breeding-rooms; thus giving a constant and sufficient supply at all times for the hatching troughs.

The premises and ponds cover some ten acres of land. Two public roads lead from the grounds, one at each extremity of the picture, and converge together at the village of Newcastle, about three-quarters of a mile distant, where an important station of the Grand Trunk Railway is located. The town of Bowmanville is situated about four miles to the west, and the town of Port Hope seventeen miles to the east.

On the summit of the mill is my own farm and residence.

No. 2 is a ground plan of the premises with the location of the buildings and ponds as described in the panoramic view No. 1.

No. 3 shows the inside arrangements of the reception house for entrapping and penning up the parent salmon. The fish enter this building through the triangular-formed weir, and become imprisoned in the first or large compartment. They are afterwards transferred (as represented by the assistant dipping them out with a small net) into the smaller pens above. The males and females are then separated and placed in different pens; in this way they remain quiet, and are more easily retaken at the time when they become ripe for laying their eggs. When mature, a dozen or more of these fish at one time are again caught with the hand net, and carried (only a few feet) to their tanks arranged for their safe keeping at the right

hand side of the breeding-room, lower flat; (No. 4,) where the workmen are engaged at their work.

No. 4. Here the process of taking the ova from the fish and impregnating it is carried on; this is done by lifting from the tank a ripe female fish and holding her over a vessel securely, and gently pressing her body with the hand when the eggs will flow freely from her. (See figure No. 5). After this operation is performed, she is liberated by dropping her into a raceway running from the room, down which she quickly swims into the pond, (marked A, on the ground plan No. 2.) A male fish is then taken from another tank, and operated on in a like manner as the female; the milk extruded from him is mixed with the eggs by a gentle stirring with the hand; this causes immediate impregnation.

The ova are then dipped out of the pan with a small ladle, and put into a measure made to contain one thousand eggs; from this they are spread evenly on the hatching trays (see apparatus plate No. 6.) These trays are made two feet long and ten inches wide, with a division in the centre, and hold four thousand eggs each; when filled they are carefully laid in the breeding troughs (shown in figures 4 and 7). After the ova are thus deposited they are closely watched, and regularly cleansed from all sediments or other impurities which may settle upon them during the process of incubation.

The eggs are of a clear salmon color, but should any prove to be unfertilized, or become injured in any way, they change their appearance to an opaque white, when they are picked out with forceps and cast away, thus preventing the remaining ova from becoming contaminated.

No. 4 and 7 explain the manner in which the breeding troughs are distributed in the rooms. In the lower flat they are placed lengthwise, in the upper room cross-wise of the building. Six of these are laid side by side with intervening aisles two feet wide for the convenience of the workmen in picking and washing the eggs. The troughs are each supplied with a constant flow of living water from the tanks which are fed from the raceway above, and are regulated in quantity by wooden taps, as shown in the cut. In the lower flat a series of aquaria are shown; they are placed alongside the wall and contain young salmon and other fish which are kept for observation, and also for exhibition, to the numerous visitors who frequent the institution.

No. 8 represents the upper story of the building, which, after taking from it office rooms, leaves a large commodious apartment used as a museum, in which are collected a number of specimens of fish of various kinds and other animals. This natural history depository is only of a few months' existence; yet it comprises numerous specimens of the salmon family and other fish, prominent among which are the large ones shown in the plate; the one on the right is a sturgeon weighing 280 lbs.; the one on the left is the tunny or giant mackerel; its weight when alive was upwards of 600 lbs.; a Greenland shark ten feet long; an immense moose deer, male and female cariboo, a bear and other animals; also an alligator ten feet long. All these specimens present a life-like appearance and are artistically mounted.

No. 9 shows the front and side elevation of the fish-breeding house proper; its dimensions are 64ft. in length by 22ft. in width, with a cellar or lower flat built of stone, and two frame stories above ground. The building presents a handsome and commanding appearance externally, and the arrangements inside are convenient and well adapted for the purposes for which they are intended. The whole establishment gives convincing proof throughout of the exercise of practical ingenuity and personal industry.

No. 10 gives a view of one of the retaining ponds (marked A, figure 2) into which the spent salmon pass from the main building after manipulation. It is about forty feet in diameter and circular in form, with an average depth of water from two to three feet.

At the time this view was taken there were in this pond between three and four hundred adult salmon, weighing from six to sixteen pounds each. It is doubtful, indeed, whether in any other part of the world a more wonderful or pleasing exhib-

bition can be enjoyed at one sight, of such numbers of large salmon as were enclosed within this small space. This extraordinary display is not of long duration, lasting only about a fortnight, generally during the last week of October and first week of November.

No. 11 gives views of the several shapes of the eggs during incubation and the growth of the embryo.

Explanation to No. 11:

No. 1. Shows the young ova developing the head (magnified).

No. 2. Shows the young ova developed (magnified).

No. 3. The head and body of the fish developed (magnified).

No. 4. Young ova before the developing, in natural size.

No. 5. Shows the ova of the natural size, after the vital principle has been developed. The body of the fish in this state has a pinkish tinge and the eyes are very large.

No. 6. The shell of the ovum just burst, and the head of the fish protruding from it.

No. 7. The state of the ovum shown after the bursting of the shell, when the pulsations of the heart become visible.

No. 8. The shell just thrown off; the tail drooping; about a third part of the shell, which is transparent, is fractured by the fish in its exertions to extricate itself. Before the shell is broken the tail envelopes the yoke, which is seen attached to the body of the fish.

No. 9. The tail in a short time becomes straight and the fish more lively, the mouth assumes a different form, and the lower and pectoral fins, which are quite transparent, are in motion simultaneously with the actions of the heart, which beats from 60 to 65 times in a minute.

No. 10 is a magnified representation of No. 7, the fish adhering to the shell, which is partly broken. No. 11 represents No. 9 magnified; the heart is before the pectoral fins under the throat.

No. 12 is a still more enlarged view of No. 9, showing the direction in which the blood circulates, as seen by a microscope.

The blood flows from under the body of the fish through the blood-vessels ramified along the sides of the back, and is there collected into a large vessel which runs along the front and bottom of the bag, communicating directly with the heart. An equal quantity of air or some transparent matter circulates with the blood. The blood is drawn by the heart from the large vessel alluded to, and thrown into regular pulsations into the vessels of the heart and throat where it assumes a dark colour. The rays of the gills are visible, and the fish soon begins to assume a brownish colour.

No. 13 Salmon, developed shape.

No. 14 Salmon, general appearance in proper season.

No. 14 Salmon (male) at the spawning season.

I have the honor to be, Sir,
Your obedient servant,

SAMUEL WILMOT,
Superintendent Fish-Breeding Establishments.

Newcastle, Ont.,
31st December, 1877.

REPORT OF MR. P. VIBERT, FISHERY OFFICER IN CHARGE OF THE
GASPE FISH-BREEDING ESTABLISHMENT IN THE PROVINCE OF
QUEBEC, FOR THE YEAR 1877.

GASPÉ BASIN, 31st December, 1877.

Hon. A. J. SMITH,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit my report on the operations connected with this establishment for the past season.

Last year I stated that the number of salmon eggs laid down was 920,000; but, according to the young fish distributed, the number of ova must have been underestimated and may be placed at 1,100,000.

The result of last winter's operations was very satisfactory, for during five months the average loss of ova was only 50 per diem. We commenced removing the fry about the 15th June, and placed them according to instructions from your Department as follows:—

Dartmouth River.....	550,000
St. John do	313,000
Mal Bay do	108,000
Grand Pabos River	80,000
	1,051,000

And besides these I planted about 20,000 at the pond in rear of the establishment. The loss in transporting the young fish was small, and the work was generally attended with success.

I set a net in the Dartmouth River as early as practicable, and caught 100 parent salmon; out of this number, unfortunately, over thirty died at pond at the fish house, owing to the low and impure state of the water. A few fish purchased from nets at Anse au Cousin in June appeared to thrive well there, although some were much injured by gill nets. I, therefore, placed the remainder at the upper retaining pond, 61 salmons, and they did very well.

At this pond (No. 2) we have now two solid dams, scows, and all that is required for the prosecution of the work; and I believe that if the Dartmouth River was reserved principally for supplying parent salmon for this establishment, there would be no trouble in securing 150 to 200 breeding fish every season by setting a net as early as possible, and placing them all in this pond, which is only a short distance from the main river; and in case it was deemed advisable to seine in the river in October, so as to have a large supply of ova, this could generally be accomplished; although it may sometimes be found impossible to do so on account of heavy rains, and this is why it is so necessary to secure a number of fish during the summer. When the spawning time arrived we had 76 fish in ponds, from which 400,000 ova was obtained.

Fifty-three salmon were seined in St. John River for this purpose, which gave 300,000 eggs; the size of the fish both in pond and on the river was very small, consequently the number of ova obtained was much less than it would otherwise have been, and these salmon were all late in spawning, it being the first day of November before all was finished.

If I could have seined in the Dartmouth River, as last year, I am sure that over one million and a half of eggs might have been laid on the rills.

It will thus be noticed that the actual number of ova in the troughs of this establishment is 750,000, which at present are looking well, and promise a large percentage of young fry for distribution next year.

Mr. Samuel Wilmot visited the establishment and retaining ponds this summer. Both my assistant and myself derived some valuable information from Mr. Wilmot with regard to fish culture, and the operations generally connected therewith.

The troughs were all thoroughly dried and varnished as also the trays. The water was drawn off the Reservoir and all the sediment removed.

The dam is in good order, and the outside of the building has been properly secured for winter ; the roof requires painting next summer.

I have the honour to be, Sir,
Your obedient servant,

PHILIP VILBERT,
*Fishery Officer in charge of the Gaspé
Fish-breeding Establishment.*

REPORT OF MR. JOHN MOWAT, FISHERY OFFICER IN CHARGE OF THE
RESTIGOUCHÉ FISH-BREEDING ESTABLISHMENT, IN THE PROVINCE
OF QUEBEC, FOR THE YEAR 1877.

MATAPEDIA, 31st December, 1877.

Hon. A. J. SMITH,
Minister of Marine and Fisheries.

SIR,—In presenting my Annual Report on this establishment, I am happy to be able to inform you that a very fine and large lot of eggs have been secured, and are at present in good condition. I caused the usual nets to be set near the house on the 24th of August, and from that date until the 11th September, caught thirty-seven males, twenty-eight females, and eleven grilse. On that date nets had to be lifted owing to rise of water, and were not again set until the 17th, fish going up in large numbers during the rise. On the 27th they were again lifted; owing to leaves and rapid current it was impossible to keep them to bottom, the small meshes of the nets forming a complete dam; small lots of lumber also were being driven down the river, and they had to be discontinued; in the interval, however, 19 males and 22 females, with 10 more grilse were secured. Those fish were carefully transferred to the ponds. Out of this number, 2 males and 11 females sickened, previous to 2nd September, and were let go again, and 3 males and 11 females died without giving any ova, the fungus carrying them off very rapidly; some of the fish took it after a day or two in pond, and without the slightest sign of abrasion, whilst others, who bore marks of injury, remained healthy until turned out. They were all used with the greatest possible care. Although, on account of their large size and strength, it is difficult to handle them without injury, particularly the females, who, at this period, will not stand rough usage.

On the 28th September the river rose greatly, and from former experience, afraid I could not secure fish here, I started up the river taking four floating cribs, seine, two large eight-inch mesh nets, two canoes, three men, scow and two horses. At both Indian House and Patapedia pools, the rise of water prevented me from using seine; the fish also had left the pools to go further up, and on the bars; I at once went on to the Lodge pool, seven miles up the main river above the Kedgwick junction; the river here is very smooth bottom and a forty fathom net sweeps the whole river. There were a good many fish showing on the bars, still they were shy and difficult to surround, retreating instantly into deep water. The men here commenced work with orders to cross down the river, while I visited the Upper Kedgwick. This river, for thirty miles, was full of salmon just commencing to nest, and it was a great sight, running down the river, seeing the fish busy on the gravel. The roughness of the bottom on this stream prevents nets from being used on it; it is full of large white quartz boulders, generally from 20 to 500 lbs weight. The Patapedia is of the same formation, while the main river is perfectly smooth above the Kedgwick seven miles below this last named river, on the 7th, I overtook the men with 74 fish, and the same night took 22 more, 55 males, 41 females, all very large. As some of them seemed ripe, I found it necessary to get down, so, leaving a spare crib, I got to Dee side on the 9th, sending the men immediately back to fill it; they arrived on the 16th with 45 more fish and caught ten more after arrival, by night, seining 133 males, 87 females and 20 grilse. I cannot account for the preponderance of males; but as 22 females from pond died and were turned out without maturing, the difference is not so great.

Out of those fish I got 1,204,000 eggs or an average of 13,800 per fish; many of them were over 36 lbs, none under 20; three fish gave 28,000, 27,000 and 25,000 respectively. The very large mesh net with which the last fish were taken accounts partly for

this; the 14 lb fish went through. I had to enlarge floor room in house and made room for fifty more trays, and there are now two tiers of trays, containing 290. When the eggs ordered for Miramichi are taken out there will be more room; still there will be danger of smothering when fry come out. Should eggs all keep well, I expect to deliver those eggs shortly now as their eyes are quite visible.

The opportunity did not occur to test the Indian house pond this season, as the seine ordered, through some mistake, did not arrive here until 27th October, when the rise of water not only prevented its use, but the fish left the only pools on that account, where it can be used successfully, but it will be tested next season. As the water is colder and the flow greater there is every prospect of the fish keeping without disease. Up to date I have measured 51,000 dead eggs, a large portion of which has come from two lots; treated the same as the others, but from some cause or failure in the fish, very few of their eggs were impregnated. The only method of impregnating was closely adhered to as ordered by Mr. Wilmot, and the percentage of unfertilized eggs is very small.

The first ova laid down here was:—

1873	120,000
1874	800,000
1875	300,000
1876	600,000
1877	1,200,000

and were distributed as follows:—

From 1874 to 1877, in Metapedia River.....	350,000
do do in Upsalquitch.....	300,000
do do in Main Restigouche.....	800,000
1874, 1875 and 1877, in Jacquet River.....	150,000
1875, 1876 and 1877, in Nouvelle River.....	150,000
1876 and 1877, in Little River.....	70,000

The building was cheaply put up, of hewn cedar logs, plank supply pipes, brush dam; it was placed in an excavation, and has no light only on one side; the action of frost, combined with the weight of embankment behind, is continually throwing and twisting the building, causing troughs to be renewed and re-levelled every season. I am also apprehensive of the supply pipe giving out, and would respectfully suggest the necessity of making preparations to put up a new building in place of putting costly repairs on the old. We have a fine level plot on our own ground, and from what I have seen now of Bedford and Newcastle, I am satisfied that this establishment can easily be made warm without earth embankments to the eaves. It can be built at a very moderate expense, particularly if the erection and finishing is extended over two seasons, enabling the work to be cheaply done, utilizing the present building until the new is completed, and I believe that a building equal to either of the above houses, excepting such a fine outside finish, can be placed for \$200 if extended over two years.

The utility of fish-breeding is now acknowledged, and the Restigouche River shows, from its continued increase, the value of artificial means, assisted by thorough protection. I have no hesitation in asserting that for the future a regular annual supply of salmon will be assured, not subject, as formerly, to one good year and two bad ones, caused by the heavy ice jams and freshets, completely destroying the whole season's young brood, and no means of replenishing the loss. The artificial means adopted by your Department will now obviate this, and at least one million young fry should be yearly placed in this river.

I have the honour to be, Sir,

Your obedient servant,

JOHN MOWAT,
*Fishery Officer in charge of the
 Restigouche Fish-breeding Establishment.*

REPORT OF MR. A. B. WILMOT, FISHERY OFFICER IN CHARGE OF THE
BEDFORD FISH-BREEDING ESTABLISHMENT, IN THE PROVINCE OF
NOVA SCOTIA, FOR THE YEAR 1877.

BEDFORD, 31st December, 1877.

Hon. A. J. SMITH,

Minister of Marine and Fisheries.

SIR,—I have the honour herewith to submit my Report upon the operations at the Bedford Fish-breeding establishment, for the past year.

It affords me very great pleasure to inform your Department, that the great success which attended the opening of this establishment, and the introduction of the system of artificial fish propagation, as detailed in my last annual report, has been far exceeded by the successful results obtained from my more extensive operations during the past year.

A more intimate knowledge of the great work in hand, and the urgent necessity of its adoption is also being gradually diffused among the people, and I find that many who at first were inclined to oppose what they considered a mere speculative theory, have now become convinced that the artificial propagation of salmon is really a feasible and practical art, and that by its means many thousands of dollars will, in a short time, be added to the value of our coast and inland fisheries.

The spirit of opposition which existed among the fishermen so largely last year, I am pleased to find, has almost entirely disappeared. During my travels through the Province, and while operating upon the different rivers, many opportunities of meeting and conversing with the fishermen presented themselves, and I have endeavoured to enlighten them upon this important and somewhat novel national enterprise, and to impress them with the necessity of their hearty co-operation with your Department in carrying out the means introduced for the creation of a great wealth for their direct benefit. The further convincing evidence of seeing thousands of artificially-hatched infant salmon placed in their rivers has very materially assisted in removing many of the old prejudices existing; and I am now happy to state that the moral support and assistance I have received from all classes of people during the last year have been very encouraging, and, in a measure, removed the difficulties to be met with in the prosecution of a work, which, in some of its branches, is of such a precarious nature.

In my report upon this establishment for the year ending 30th December, 1876, I stated that 1,000,000 eggs had been successfully laid down in the hatching troughs, and from their healthy and promising appearance I assured your Department of a very satisfactory result to the season's operations. I am now happy to inform you that the issue quite exceeded my most sanguine expectations, and that 1,000,000 fry, or about 90 per cent. of the original number, were safely hatched. This favourable result, while being chiefly attributed to systematic arrangement of the interior of this hatchery room, and the perfect nature of the appliances introduced for the safe and easy management of a large number of ova, was, to a large extent, brought about by the propitious circumstances attending the process of incubation.

The weather, from the 1st of January to the 15th of March, was very steady and equable in temperature; the ground was well covered with snow; no thaws or freshets took place during that period, and the water in the river continued clear and pure. Consequently very little sediment or other foul matter was deposited upon the ova, and the loss occasioned by the washing and handling required when frequent freshets occur, was almost entirely avoided. The period during which the young fry burst the shell, and the following six weeks or nursing season were also exceptionally favourable. The temperature of the water continued low, thus preventing the rapid growth of fungus, and lessening the care and labour usually necessary during

this critical period, so that notwithstanding the somewhat overcrowded state of the nursery troughs, the loss of fry was quite inappreciable.

Distribution of Fry last Spring.

As soon as the infant fish had attained the proper age this important part of the work was undertaken, and was performed with the greatest possible despatch. The work of distribution is of necessity very much hurried, and is a season of great anxiety and labour to all concerned. In order to be successful the transportation of the fry should not be attempted until the age of three weeks has been reached, and should be completed before the umbilical sac is entirely absorbed, which is about forty days from the time of emerging from the shell. During transportation care must be taken that the water be kept well aerated and at a uniform temperature, otherwise the fry will become exhausted before reaching their destination. Caution and judgment, which can only be acquired by experience in the business, are necessary in every detail of this work, which is the consummation of all the labour and pains bestowed upon the ova during the previous seven months. Under these conditions, and with a million fry in the nursing troughs, all ready for distribution, the magnitude of the work at this season can be understood.

The distribution which extended over a very large portion of the Province, and comprised thirty rivers, was performed with almost perfect success, no loss being met with except from those intended for the rivers entering Mahone Bay, Lunenburg County. The loss from this lot amounted to about 50 per cent, from the unfavorable circumstances I was obliged to contend with in attempting to reach that remote point.

In accordance with the instructions received from your Department, the distribution was as follows:—

Sackville River, Halifax Co.....	150,000
Shubenacadie River, "	50,000
Musquodoboit " "	50,000
Gay's " "	20,000
Indian " "	20,000
Ingraham " "	20,000
North East " "	10,000
Little Salmon " "	10,000
Mosher's " "	10,000
Nine Mile " "	20,000
 Total Halifax Co.....	 360,000
 Meander River, Hants Co.....	 20,000
Windsor " "	20,000
 Total Hants Co.....	 40,000
 Gaspareaux River, King's Co.....	 20,000
Cornwallis " "	20,000
 Total King's Co.....	 40,000
 Philip River, Cumberland Co.....	 100,000
Wallace " "	40,000
Pugwash " "	25,000
 Total Cumberland Co.....	 165,000
 Annapolis River, Annapolis Co.....	 50,000

Salmon River, Colchester Co.	.....	60,000
Stewiacke " "	.....	25,000
North " "	.....	25,000
Debert " "	.....	20,000
 Total Colchester Co.	.....	130,000
 West River, Pictou Co.	.....	50,000
East " "	.....	50,000
Middle " "	.....	50,000
Sutherland's River, Pictou Co.	.....	20,000
 Total Pictou Co.	.....	170,000
 Martin's River, Lunenburg Co.	.....	8,000
Gold " "	.....	6,000
Middle " "	.....	6,000
 Total Lunenburg Co.	.....	20,000
 Tracadie River, Guysboro' Co	.....	20,000
Retained for experimental purposes	.....	5,000
 25,000		
 Showing a grand total of	.....	1,000,000

salmon fry distributed among the principal rivers of the central counties of this Province. The cool and favorable state of the weather during the greater part of the month of May materially assisted me in this important and arduous work, and reduced the risks of loss during the long and tedious journeys some of the fry were subjected to before reaching their destination, and in almost every instance they were quite as strong and healthy when placed in the rivers as when first taken from the hatching troughs.

The attempt to deposit 20,000 fry in the waters of Martins, Gold and Middle Rivers, as stated above, was unsuccessful. In consequence of the failure in regard to those streams the previous year, I was particularly anxious to secure success this season, and to this end I communicated with Overseer Redden and requested him to render me assistance and give me information as to the best and most expeditious route by which Chester Basin could be reached. He advised chartering a sailing vessel from Halifax direct to the mouth of Gold River; but, in consequence of the uncertainty of this route and the probable detention from fogs, calms, storms or head winds, I decided to take the more speedy route by steamers from Halifax to Lunenburg, then by wagon twelve miles, to Martin's River, and thence by row-boat to Gold and Middle Rivers. The necessary arrangements being made, I left the hatching-house, on the morning of the 16th May, with three barrels containing the above number of fry; they were conveyed to Halifax by whale-boat, where passage was taken by steamer, and the town of Lunenburg reached at 12 noon the same day, when no signs of exhaustion was exhibited, but the fry was as strong and lively as when first taken from the nursing troughs. From here they were conveyed to Martin's River on a light spring wagon; but before reaching that point I observed that many became exhausted from the effects of the violent motion imparted to the water in the barrels, caused by the exceedingly rough state of the roads. At the river I was met by C. E. Church, Esq., M.P., Overseer Redden and others, and the condition of the fry stated. As very few had as yet become exhausted beyond recovery, if placed into running water, I had decided to put the whole number in this river and thus avoid any great loss; but finding that a strong desire existed among the parties present to

have a portion put into Gold River, I yielded to their wishes, but met with a very heavy loss by so doing.

From this second failure in attempting to convey salmon fry to such remote points, and actuated by an earnest desire to successfully carry out in all its details the work entrusted to me, and to prevent any partial subversion of the great benefits accruing to the country through its introduction, I beg most respectfully to submit the following remarks.

I do not consider it advisable, or in the best interests of the enterprise, to attempt at present to restock from this establishment those rivers which are not within 15 or 20 miles of the lines of railway now in operation. It cannot be done with any certainty of success, and, besides entailing a probable loss, it occupies two or three days of time (which at that season is invaluable) in the transportation of a comparatively small number of fry to those remote points which might be much more profitably employed in distributing a larger number among those rivers to which a round trip can be made by means of the railway in operation in one day. When the large number of rivers (about 30) so situated is considered, and the enormity of work which is always requisite at this season is taken into account, it will be seen that a very large field is to be covered. As railway conveyance is the only easy and rapid and, consequently, safe mode of transporting the young fry to any great distance, it would be useless to attempt to restock the rivers at the extreme parts of this Province until the lines now in course of construction are completed; then every river from Yarmouth in the west to the Gut of Canso can be reached in safety and receive its quota of fry annually.

When selecting suitable localities on the different rivers in which to deposit the young fry, the upper portions of the stream were invariably chosen, as offering the greatest natural advantages for their rapid growth and protection. Animaiculae and the eggs of the water insects, which comprise the principal food of the infant fish during the parr stage, are found there in the largest quantities, and greater immunity from destruction by the swarms of predacious fish which enter the rivers in the spring of the year in search of food, is obtained. Many of these streams possess admirable natural facilities for the rearing of young salmon; generally the beds are of a gravelly nature and afford magnificent spawning grounds for the parent fish, and now, that in many instances the lumbering interests are of but slight importance, in consequence of most of the valuable timber being cut off, it appears to be an opportune time to regain the wealth they formerly possessed in their salmon fisheries. The great obstacle to the accomplishment of this object in a short space of time, is the number of impassable dams which obstruct the parent salmon to the spawning grounds. In some instances, as many as seven or eight of these obstructions exist. The mill owners, generally, are very reluctant to provide suitable fish passes, but appear to entertain the idea that the rivers are their special properties, and that they alone are entitled to the benefits to be derived from the existence of those streams. This disposition will materially retard the progress of the work contemplated by your Department, and until efficient fish ladders are erected over every dam, the great object can never be reached; the rivers will never become self-sustaining, but will be useful only as nursing or feeding grounds for the artificially hatched salmon. It is a well established fact, that all anadromous fish seek to return, for the purpose of spawning, to the place where they were first introduced into the water, and that their homes for reproduction are those rivers where their first or parr stage is passed, hence the necessity for a free and uninterrupted passage way from the sea to the heads of the rivers. The fact that almost unlimited numbers of salmon fry can be hatched and successfully planted in our rivers, has long since been fully demonstrated, but that our river or coast fisheries will be benefitted by this is doubtful indeed, unless means are adopted which will enable these fish to ascend to the spawning grounds, and in turn produce their kind.

Ova collected this Season.

The work of collecting a stock of ova for this establishment during the past season was accompanied by much less difficulty than in former years, but I was

unable to reduce the expenditure to any great extent, in consequence of the necessity for operating upon so many rivers, and employing four or five different crews of fishermen. During the past summer considerable improvements and additions were made to the appliances for catching and retaining a supply of the parent fish on the Philip, where an efficient reception tank was built last year, and that the temporary creels which I had used last season were not satisfactory, I obtained permission from your Department to build additional reception tanks on West River, Pictou Co., and Musquodoboit River, Halifax Co.; these appliances were accordingly prepared for the reception of the parent fish, and gave perfect satisfaction. The choice of the Musquodoboit as one of the points of collection proved to be a fortunate one, as a much larger number of salmon were caught on this river than from any of the others. The presence of a very efficient fish ladder over the dam which obstructs the channel of this river immediately at its mouth, rendered the work of catching the salmon a comparatively easy matter. By means of a small wooden trap placed at the head of this ladder, the fish were captured without any handling, and free from the bruises and injuries always received when the ordinary mesh or gill nets are used as on the other rivers. After being caught in this trap, they were conveyed a distance of two miles by waggon to a beautifully clear raceway, where they were allowed to disport themselves on the fine gravelly beds until ready for manipulation, when they were driven into a reception tank built at the lower end of this raceway, and separated preparatory to spawning. The natural advantages for the work which this place possesses are of an exceptionally favorable nature, and as an evidence of this I might state that of 190 fish caught and treated as above, not one died or was found injured or at all scarred. From my experience of this place, I am so favorably impressed with its perfect adaptability for the purpose, that, with the consent of your Department, I purpose making it the principal point of collection for the future. The fish in that river are as large as those frequenting River Philip or the rivers of Pictou Co., and in numbers far exceed those streams. I have reason to believe that had the fishermen been permitted to labour undisturbed during the month of October, that over 300 salmon would have been taken from this river alone. At West River, owing to the high freshets of October, the catch was small, being only 80, and of this number about two-thirds were males, and, consequently, of no value to me. On River Philip the catch amounted to 120, with a great superabundance of males; some beautiful specimens were taken from this river, many weighing over 25 lbs, and two females exceeded 35 lbs in weight each, and yielding respectively 20,000 and 25,000 eggs.

For the purpose of obtaining an approximate idea of the number of salmon entering the Sackville River, and the extent to which that stream could be depended upon for a supply of ova, I placed a small trap at the head of the fish ladder over the dam, immediately above the hatching house, and succeeded in capturing about 60 fish, mostly grilse or small salmon. These were taken in the latter part of September, and a subsequent large run in October entered the river, but escaped me. From the numbers seen leaping over the dam at this time, I have reason to believe that fully 200 might have been caught if more efficient means had been employed; but with the rather limited knowledge I possessed of its resources, I did not deem it advisable to expend much money or devote much time to it at this busy season of the year. However, enough was observed to warrant me in advising your Department to adopt some means which will enable me to utilize these fish, and thus reduce the annual outlay for the collection of ova as under the present system. The details and requirements by which this can be accomplished have been furnished your Department, and I beg to again urge upon you their adoption during the coming year.

The total number of fish secured at the different points of collection was 420, of these 240 were males and 180 females, from which I obtained 1,650,000 eggs; 200,000 of this quantity were disposed of as directed by your Department; the balance of 1,450,000 were deposited in the hatching troughs of this Establishment. The loss up to the present time has been very light, and, as the embryo is now plainly visible, I have every reason to expect a most successful hatching.

The interior of the hatching-room is in the same satisfactory condition as reported last year, and I hope to be able to lay down a much larger number of ova next season.

I have the honour to be, Sir,
Your obedient Servant,

A. B. WILMOT,
*Fishery Officer in charge
of the Bedford Fish breeding Establishment.*

REPORT OF W. H. VENNING, Esq., INSPECTOR OF FISHERIES, ON THE MIRAMICHI FISH-BREEDING ESTABLISHMENT FOR THE SEASON OF 1877, AND THE TRANSPORT OF SALMON OVA FROM BEDFORD AND RESTIGOUCHE.

St. JOHN, N.B., 31st December, 1877.

Hon. A. J. SMITH,
Minister of Marine and Fisheries.

SIR,—The ova laid down in the fall of 1876 continued to progress favourably with very small loss until the latter part of March, 1877, when a heavy freshet set in. Large deposits of black sediment covered the eggs, and a very serious loss by addling occurred. On being informed of these facts by Mr. Sheasgreen, the caretaker of the establishment, I supposed that this loss was occasioned by some substance in the water, which acted on the zinc of which the trays were made, and I immediately instructed him to transfer all the eggs from zinc trays to earthen ones obtained from Mr. A. B. Wilmot, of the Bedford House, and to reduce the number on these, so as to give them more room, thinking they would be better if but a single layer of eggs was on the bottom of each tray, as this would prevent so much sediment from adhering. He did this, but an alarming loss still continued, and on the 7th April I went to Miramichi to see if anything could be done to remedy this serious and unexpected misfortune.

On arriving at the Hatching House I found the freshet still very high and the water loaded with an amount of sediment that completely covered the eggs, rendering it necessary to wash them every day. This had continued for ten days, and the loss in that time had more than trebled the total loss since the eggs were placed in the troughs. The deaths had been greatest on the zinc trays, next on the gravelled ones, and was very serious indeed. I carefully measured the trays, and found as follows:—

217 earthen trays, containing 1,500 each	325,500
106 saucers, " 350 "	37,100
3 double zinc, " 3,000 "	9,000
2 wire, " 3,000 "	6,000
<hr/>	
	377,600

Showing that over forty per cent of the whole number laid down had perished, while the daily loss still going on was very considerable.

I immediately apprised you of all these facts in my report, dated 11th April, and Samuel Wilmot, Esq., was sent from Ontario to ascertain the causes that had led to this disastrous loss. I met Mr. Wilmot at Newcastle on the 16th April, and with him visited the House. The freshet was then subsiding and the water running much clearer than when I saw it on the 7th.

All the facts above recorded were stated to Mr. Wilmot, and every occurrence known to me was fully detailed, to enable him to form a correct opinion as to the cause of this unfortunate calamity. He measured the trays, and found as follows:—

217 earthen trays, each 1,400	303,800
4 zinc " " 1,400	4,600
2 wire " " 850	1,700
106 earthen saucers, 180	19,080
<hr/>	
Deduct some scant trays	330,800
	4,180
	<hr/>
	326,000

Showing a loss between the 8th and 16th April of 51,600 eggs.

As the freshet fell and the water ran clearer the daily loss grew smaller, until about the last of April, up to which date only about 7,500 more were lost, and from that time until the fish emerged from the shell, early in May, the loss did not exceed 500, leaving 318,000 healthy young fish in the troughs.

These were nursed without further loss, and early in June were distributed as follows:—

North-west Miramichi	50,000
South-west do	50,000
Little South-west Miramichi.....	50,000
Sevogle	20,000
Bartibog	20,000
Tabusintac	20,000
Burnt Church.....	20,000
Napan River.....	20,000
Black River	20,000
Salmon River, Kent County	20,000
Shediac River, Westmoreland County.....	20,000

	318,000

The transportation, principally by horse and waggon, was made without any appreciable loss, as the weather was cool and favourable for the purpose.

The report made by Mr. Wilmot attributes the loss to want of judgment and carelessness on the part of Mr. Sheasgreen. In my remarks on this report, submitted to you, I have given my reasons for dissenting from the conclusions arrived at by Mr. Wilmot, and have also given you my opinion of the real cause of the two disasters that have befallen this house. The first one occurred when it was under the care of Mr. A. B. Wilmot, and the superintendence of Samuel Wilmot Esq.; the second one occurred under the care of Mr. Sheasgreen, and my superintendence, undertaken at the earnest wish of the Commissioner of Fisheries, while Mr. Samuel Wilmot was busily engaged at Sandwich, and Mr. A. B. Wilmot at Bedford.

Of course it is an easy solution of the difficulty to attribute it in both cases to incompetence and negligence, as Mr. Wilmot has done.

Neither of the accused parties has had an opportunity given him of rebutting this charge, nor has Mr. Wilmot given any proofs of its truth, further than to state that such is his opinion, based upon a very limited induction. As I have had much better opportunities of judging in this matter, and a much more intimate knowledge of the stream that supplied the House, and its peculiarities, I am forced to a conclusion entirely different from the one expressed by Mr. Wilmot, and I have given you my reasons for believing that the "carelessness and want of judgment" were shown in the original arrangement of the House and not in the subsequent management of it.

In my opinion, based upon a careful consideration of the facts recorded and detailed to you in my special letter on this subject, the real cause of all the trouble has been an inadequate flow of water from the tank into the hatching troughs, owing to the insufficient head in the supply pond, or to the incapacity of the supplying pipes to keep the water at a sufficient height in the tank. I have stated this opinion to Samuel Wilmot, Esq., and expressed my belief that in order to make this establishment successful it will be necessary to largely increase the supply of water, either by raising the head in the pond or by increasing the capacity of the pipes that lead from the pond to the reservoir in the hatching room. I think it my duty to record my conviction that until this is done the same loss will occur in future whenever a large number of ova are laid down, because the flow through the hatching troughs is not sufficient to supply the requisite aerated water to a large number of ova in an advanced stage of development. If this defect is remedied, I see no reason why this House should not succeed as well as any other now in operation.

During last summer, Samuel Wilmot, Esq., took the entire control and management of the House, and I trust that, with his superior knowledge and experience, and with the change I have pointed out as absolutely necessary, the difficulties that have beset this establishment will be overcome.

On the 14th November, I received a telegram from Mr. A. B. Wilmot requesting me to meet him at Moncton and take charge of 200,000 salmon ova for the Miramichi Hatching-House. I left here on the night train, and on arriving at Moncton met Mr. Wilmot with the eggs in charge. I requested him to accompany me to Miramichi to assist me in carefully handling the eggs and also to give me his opinion as to the sufficiency of the head of water now in that establishment to hatch and nurse all ova the troughs will hold.

We were met at the Station by Overseer Hogan with a good spring waggon, and immediately started for the House, where we arrived about 4 a.m. on the morning of Saturday. Mr. Wilmot assisted in laying down the eggs, which I am happy to state looked well and gave every indication of being healthy and in good condition. Mr. Wilmot then inspected the feeding dam, measured the height of water in the tank, and expressed his belief that the increased flow of water will remove at least one cause of failure, and that the chances of success are now much increased.

There are in the troughs 510,000 ova, which are doing well, with a small percentage of loss. With the 200,000 to be supplied by Mr. Mowat, there will be 710,000, which will enable us to test the establishment this winter and next spring. I have great confidence in the successful result, and hope my judgment will be found correct.

On the 17th January, 1878, I left St. John by night train for Dee Side, Matapedia, in order to transfer to the Miramichi hatching-house the overplus of 200,000 salmon eggs, of which Mr. Mowat was desirous of being relieved, fearing overcrowding in his restricted trough room when the young fish came from the shell.

I arrived at Dee Side on Saturday, and as the down trains lay over Sunday at Campbellton, I could not leave until Monday night. On Monday afternoon, with Mr. Mowat's assistance, I packed the eggs, which were in good condition, the young fish being plainly visible in all. The weather was very favourable, being soft and mild, and we reached Miramichi station about two o'clock on the morning of Tuesday. Overseer Hogan met us at the station with a suitable conveyance, and about 4.30 a.m. we reached the House and proceeded to transfer the eggs to the hatching troughs which was done as quickly as possible.

The eggs turned out exceedingly well, having stood the journey and the double operation of packing and unpacking with very small loss, not over 2,000 having died. They were transferred to the troughs, and when I left the house on Tuesday morning all looked well and promising.

There are now in this house 710,000 healthy ova; the embryos are visible in all the eggs, and many of them show signs of life, their motions being very perceptible. From present appearances I confidently anticipate a successful issue. If anything should happen, I have no hesitation in saying it will be in consequence of the limited supply of water flowing into the troughs. Although this is nearly double what it was last winter and previously, in consequence of raising the head in the supply pond, which was done last winter by Mr. S. Wilmot's directions, still the supply is not much more than one half that of the Bedford house, and not more than quarter that of the Dee Side house. I am in hopes, however, that it will prove sufficient to hatch and nurse the quantity now in the troughs; but I must again repeat my conviction, that, before it will be safe to lay down a million in this House, the supply of water must be largely increased. I have expressed this conviction to Mr. S. Wilmot, and I trust he will see the necessity of having the requisite alterations made before next season passes.

I have the honour to be, Sir,
Your obedient servant,
W. H. VENNING,
Inspector of Fisheries, New Brunswick.

REPORT OF MR. JOHN NEVIN, FISHERY OFFICER IN CHARGE OF
THE SANDWICH FISH-BREEDING ESTABLISHMENT, IN THE
PROVINCE OF ONTARIO, FOR THE YEAR 1877.

HON. A. J. SMITH,
Minister of Marine and Fisheries.

SANDWICH, 31st December, 1877.

SIR,—I herewith beg leave to present my annual report as officer in charge of the Fish-breeding Establishment at Sandwich:—

Owing to the small catch of white-fish, and to the fact that the fish did not commence spawning this year until the 9th of November, some fourteen days later than last year, we were unable to obtain any spawn from the swing-nets, and we had considerable difficulty in obtaining the amount we required. We collected altogether 26,000,000 eggs, of which we have at present, in an advanced state of hatching, some 22,000,000.

The following list will show the numbers of eggs taken from each ground, the date of getting them, and the names of parties owning the grounds; also the names of the persons who collected the eggs; and also the names of those persons who did not furnish any eggs, and the reasons why:—

Date of Gathering.	Number of Eggs.	Ground where taken.	Name of Person who gave Eggs.	Persons who collected Eggs.
1877.				
Nov. 9....	500,000	Fighting Island..	J. P. Clark	J. Nevin.....
do 10 & 11	1,500,000	do	do	M. O'Brien
do 11.....	1,000,000	do	D. Meloche.....	J. Nevin.....
do 12.....	8,000,000	do	L. Gerard	do
do 15.....	1,000,000	Turkey Island ..	D. Norvell.....	C. Lemandre
do 16.....	500,000	Detroit River....	J. Meloche.....	J. Nevin
do 9.....	1,000,000	Bois Blanc.....	A. Rankin	E. Boismier
do 10.....	500,000	do	do	A. Martin
do 11 to 17	12,000,000	do	do	Wm. Hill.....
	26,000,000			

The new hatching tins work remarkably well, if the spawn be collected by competent persons, it will only require one person to look after every 25,000,000 eggs, which by the other plan required about ten.

The engine and pumps are working well; by burning wood we will make a saving in fuel of fully one half over coal. Everything being in good order in the House, we are prepared to lay down and take care of 35,000,000 eggs.

I have the honour to be, Sir,
Your obedient servant,

JAMES NEVIN,
*Fishery Officer in charge of the
Sandwich Fish-breeding Establishment.*

EXTRACTS FROM FISHERY OVERSEER JOHN W. KERR'S REPORT ON
SALMON FREQUENTING THE RIVERS AND CREEKS OF LAKE
ONTARIO.

DUFFIN'S CREEK.

On the 19th October, in company with Mr. John Gordon, Sr., the local guardian of this creek, I made a careful examination and found the first bed of the season, and from this date up to the 24th day of November last, salmon were daily seen, when the last salmon took his departure. In all, there appeared to be 40 distinct beds, and 55 salmon were counted in this creek from time to time during the period herein set forth.

LYON'S CREEK.

Mr. James Story, the guardian on this creek, reports that he observed six salmon beds in this creek, between the Grand Trunk Railway and the Kingston Road, upon the Flats and on the Rapids, but he saw no fish, although twelve salmon were seen there by other persons. I would recommend that a gate, wired, should be placed under the bridge at the Kingston Road every fall during the spawning season, so as to prevent the salmon going beyond this bridge; for the simple reason that during other and previous years, I have heard and known parent salmon to ascend the two branches of this creek, which run north and west, and getting frozen in; and when spring broke up the ice and it came down stream, salmon were found embedded therein dead.

THE ROUGE RIVER.

Mr. Henry Moon, the guardian, states that he noticed five salmon beds in the Little Rouge, and three beds in the Big Rouge; and he reports that, to his belief, a salmon was speared and taken away one night, after he had passed a certain spot on the Little Rouge to cross over to the Big Rouge.

THE RIVER CREDIT.

Mr. James G. Wilcox, Fishery Warden on a portion of this stream, reported no salmon being observed in that stream during the spawning season last fall. The Messrs. Barber, of Streetsville, being remonstrated with for permitting dye-stuffs, creosote &c., to pass into this river from their woollen and other factories, alleged that no salmon has been seen north of Dundas Street at Springfield, during the last thirty years. I differ from them, as a few salmon were caught last spring by anglers, in a small creek which enters the River Credit at Norval, and in which Mr. Samuel Wilmot deposited some fry about four or five years ago. Two salmon were also caught, one of them with a fry in the Credit, on Lot No. 3, 2nd Concession, Township of Toronto, about 13 inches long, and on the same day after a freshet, the person who caught this salmon, states he saw several small salmon left dead after the water receded.

LAKE ONTARIO.

With respect to the catch of salmon during the past year in Lake Ontario, I beg to report that a salmon was caught at the mouth of the Rouge, by Mr. William Cowan, and liberated. Mr. Black caught two salmon at Frenchman's Bay. Mr. David Ward, of Toronto Island, caught two salmon in a hauling seine, and one in a herring gill-net. Mr. Gray, Toronto, caught a young salmon and liberated it. Mr. Patrick Hand, caught a salmon in a herring gill-net, 5 pounds weight, at Winona. Mr. Duncan McGillivray, Burlington Beach, caught a speckled trout 2 lbs. weight, and a salmon $1\frac{1}{2}$ lbs. weight, in Lake Ontario. Mr. David Tryson, same place, caught two salmon in Lake Ontario, $2\frac{1}{2}$ and $1\frac{1}{2}$ lbs. weight. Mr. Mortimer Cory,

same place, caught a small salmon. Mr. Ben. Folds, same place, caught two small salmon ; Mr. Ben. Clink, same place, caught a small salmon in Lake Ontario, Burlington Beach. Mr. John Taaffe, caught two small salmon in Lake Ontario, at Burlington Beach ; and Mr. Charles Shears, when spearing last spring in a fish-house on Burlington Bay, near Willow Point, speared a 7 lb. salmon. This shows that, whatever others may say to the contrary, salmon are still on the increase in Lake Ontario. The cost of guarding the salmon creeks last fall was \$160. I may also state that many salmon that were found alive in the gill-nets by fishermen, were liberated ; thus showing that there was no intention on the part of fishermen of taking these young salmon fish, wherever it could be avoided. The people in general have a more kindly disposition towards our salmon.

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AT
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SPECIAL REPORTS

ON THE CONDITION OF THE

FISH-BREEDING ESTABLISHMENT

AT

MIRAMICHI, NEW BRUNSWICK.

NEWCASTLE, ONTARIO, 28th June, 1877.

The Hon. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

SIR.—On the 16th of April last, I visited the Miramichi Salmon-Breeding Establishment at your request, with a view to ascertain, if possible, the true position there with regard to the numbers of ova on the hatching trays, and learn the cause of the great discrepancy reported to exist between the quantity of eggs that were originally laid down in November last.

On arriving at the Hatchery in company with Mr. Inspector Venning and Mr. John Hogan, local Fishery Overseer, I found the external and internal appearance of the establishment to be in a satisfactory condition. The breeding troughs and hatching trays were well supplied with good living water and all the appliances in connection with the works gave evidence of cleanliness and order, and the ova were found to be in a very healthy state and far advanced. The embryos were well developed and showed unmistakable signs of strength and vigour.

A heavy flow of water was running in the stream which supplies the hatchery at the time of my visit; this was accounted for by the general melting of the snow throughout the country, and was called a "freshet" by the persons present as well as by Mr. Sheasgreen the officer in charge.

The time of my inspection was therefore an opportune one, as I was enabled to see the state of the water as compared with other streams upon which other breeding establishments have been built in other sections of the country, and particularly so during the time of a "freshet." I therefore examined this water very closely so far as its purity and taste was concerned. I found it dark or porter coloured, nevertheless quite pure and seemingly free from sedimentary matter, and quite palatable to drink. In fact, judging from general appearances and without a chemical test, I should pronounce the water of this stream for fish-breeding purposes equal to any other where similar establishments are now being carried on successfully. Having satisfied myself with regard to the unexceptionable character of the water, I then proceeded to make a fair and accurate calculation of the number of ova then lying upon the hatching trays. This was done by the usual process of counting and measurement, which for all reasonable and practical purposes will so nearly app roxi-

mate the actual numbers as to leave no doubts concerning the correctness of the result. The sum total of eggs thus ascertained amounted to 326,000 healthy vivified spawn. They were distributed as follows:—

On 217 Earthen trays each.....	1400	= 303,800
“ 4 Zinc “ “	1400	= 5,600
“ 2 Wire “ “	850	= 1,700
“ 106 Earthen saucers “	180	= 19,080
		330,180
Deduct on some trays.....		4,180
		326,000
Total.....		326,000

On the 6th of November last, 650,000 eggs were reported to your Department by the officials as having been laid down in the Miramichi Hatchery.

On the 17th of November, Mr. Sheasgreen, the caretaker, writes thus: "Between 600,000 and 700,000 eggs laid down here; they look well."

On the 2nd December, Mr. Venning reports: "Loss almost inappreciable, not more than 1,500 dead ones having been removed; the eggs showed a bright and healthy appearance, the embryo being plainly discernable in all."

From the above official statements I made mention in my annual return to your Department, of 31st December last, "that 600,000 salmon ova were deposited in the Miramichi Breeding Establishment during the fall of 1876."

The difference between the numbers of eggs reported to have been laid down in the autumn of 1876, and the actual quantity on hand at the time of my visit to the hatchery on the 16th April, would show a falling off of one-half of the whole, or fifty per cent of a loss. This appears very extraordinary indeed, in the face of the several statements which were made from time to time, "that everything was going on well, " and that the losses were inappreciable."

The alleged cause of this extremely unusual loss of eggs is attributed by the officer in charge to the large quantity of sedimentary matter that was deposited on them from the effects of heavy spring freshets, and from being placed on zinc trays, or from both causes combined, by which some chemical action was produced which killed the ova. Should either of these causes, or a union of the two, have produced this terrible loss, then the disaster might be accounted for. But it is very doubtful indeed whether these were the real causes of the great reduction in the numbers of eggs.

At a period as late as the end of the month of March, it was reported by the caretaker "that the total loss of eggs did not exceed 50,000." Taking this statement to be correct, there would still have been on hand about 92 per cent, or nearly 600,000 ova.

On the 4th of April, the works were visited by Messrs. Snowball and Smith; these gentlemen each made a hurried calculation of the number of eggs on the trays, putting them down at 280,000. Whilst this count may have approximated the quantity, it was nevertheless quite under the mark, as the true estimate should have been upwards of 320,000.

On the 9th of April, Mr. Venning, during a visit which he made to the hatchery, made a calculation of the number of eggs, as near as could be, which was as follows:

On 217 earthen trays, each 1,500 eggs.....	325,500
“ 106 “ saucers, each 350.....	37,100
“ 10 zinc and 1 wire tray, 1,500.....	15,000
Total	377,600

As the correct count was 326,000 on the 16th April, being the time of my inspection of the establishment, the estimates made by Messrs. Snowball and Smith

of 250,000 on the 4th of April, and that of Mr. Venning on the 9th April, of 377,600 (though differing widely) may be taken as some data from which to fix the time in which the great bulk of the alleged loss of ova took place; this, then, must have been between the latter part of the month of March and the 4th or 9th of April. During this period of time some 270,000 eggs (which just previously were reported to be in good condition) all at once perished.

This great loss of fish eggs being of such an extraordinary nature, the statement of their numbers on the trays so conflicting, and the cause of their mortality as related being untenable, has not been satisfactorily explained; I am therefore compelled, however unpleasant it may be, in following out the dictates of my judgment, to say that the true cause of the difficulty and loss of ova at the Miramichi Fish-Breeding Establishment, has resulted, in my opinion, from incompetency or neglect, or both, on the part of the officer in charge of the building, and that deception has been resorted to in order to cover up the actual state of affairs.

Incompetency has been shown either in the incorrect method of counting the eggs when first taken, or in the improper mode of impregnating them, whereby the numbers became so greatly reduced on the 16th April, to what they were represented to be when first laid on the hatching trays in the previous month of March.

Neglect must have been practised to allow such an extraordinary percentage of ova to die (assuming that the alleged numbers were laid down and properly fertilized) as it would be almost impossible, even with the most ordinary care, (and quite unprecedented elsewhere) that the enormous loss of fifty per cent of the whole should take place in so short a time, and at that advanced period of incubation when the embryos had become almost perfect fry, and possessed great powers of endurance and vitality.

Deception, I fear, has been resorted to in order to cover up incompetency or neglect, by attributing the falling off in numbers and the death of the eggs, to sedimentary matter in the water, and to alleged injury in the use of zinc trays.

As this is the second occurrence of a similar misfortune in the serious loss of salmon ova at the Miramichi Salmon-Breeding Establishment, I feel it incumbent upon me to make these plain statements of my views with regard to the working of that institution. Of the loss there in 1875, I very plainly stated to your Department that it was caused by negligence and want of attention to the work; I am of the same opinion still. Of the loss of 1876, I am compelled to say that incompetency, added to mistakements of the number of ova, and of other facts, have produced results similar to the season of 1875.

In addition to my instructions concerning the loss of eggs at Miramichi, my attention was directed to a complaint against the officer in charge, for incivility offered to certain gentlemen when visiting the Hatchery. As Mr. Sheasgreen has already, by letter, admitted his error in this case, it will be unnecessary for me to further revert to it. I may, however, here state, for your information, that I have made it an invariable rule to draw the attention of the officers in charge of the several fish-breeding establishments, that it was desirable that every possible attention and civility should be extended to visitors; and one of the principal objects aimed at by me has been to make the several institutions as attractive as possible, in order to induce persons to visit and inspect them, for by this means more knowledge would be disseminated amongst the people in relation to this somewhat novel, yet highly important national enterprise.

I have the honour to be, &c.,

SAMUEL WILMOT,
Supt. Fish Culture.

FISHERIES OFFICE, ST. JOHN, N.B.,
1st December, 1877.

The Hon. Minister of
Marine and Fisheries,
Dorchester, N.B.

SIR.—I thank you for directing a copy of Mr. Wilmot's report, on the Miramichi Hatching House, dated 28th June last, to be sent to me.

I have carefully read it, and am glad to find that no charges against my official integrity have been made, and that the reiterated slanders of the Editor of the *Advance*, against me personally, are entirely unsupported by anything Mr. Wilmot has written. My own reports to the Department, dated 7th and 11th April last, are fully corroborated by Mr. Wilmot, who also corrects the erroneous statements of Messrs. Snowball and Smith, as to the number of ova in the House at the time of their visit.

As the Miramichi River sadly needs the assistance of this establishment to keep up its stock of salmon, which has been visibly failing for some years, I have always felt a great interest in its success, and I still hope that it can be made as successful as any other house now in operation; but I am convinced it has some serious obstacles to contend with.

While I freely admit the great ability of Mr. Samuel Wilmot, and his superior knowledge of all matters connected with practical fish culture, still, with deference and respect, I venture to submit some remarks on several opinions expressed in his report, for which I respectfully beg your consideration, because I have had better opportunities than he has had for knowing the nature and peculiarities of the stream which supplies the hatching trough, and the character and honesty of Mr. Sheasgreen, the officer in immediate charge of the House.

1st. Mr. Wilmot errs in saying that he was "enabled to see the state of the water during the time of a freshet." At the time he considers so opportune for this purpose, the freshet had nearly subsided, and the stream was comparatively clear and pure. Had he seen it on the 9th April and previously, instead of on the 16th, he would scarcely have written his remarks on its purity and freedom from sedimentary matter. Even on the 16th of April, six days after the water had fallen several feet, he describes it as "dark or porter coloured." How pure and free from sedimentary matter such water could be, you are quite as well able to judge as either Mr. Wilmot or myself. But this I affirm—that when I saw the water on the 9th of April, and described it in my report to you of the 11th of April, its character was entirely different from that which Mr. Wilmot describes on the 16th, and no man with eyes could truthfully say that it was anything but most foul and dirty. Therefore I submit that Mr. Wilmot was sadly in error when he says he "satisfied himself with regard to the unexceptionable character of the water," and pronounces it, for fish-breeding purposes, equal to any other where similar establishments are now being carried on successfully.

2nd. I honestly believe that Mr. Wilmot errs in attributing the loss of either 1875 or 1877 to incompetency or neglect. Of the former year, Mr. A. B. Wilmot's report gives his opinion, founded on the facts recorded, and I see no fair grounds for questioning these facts, while there are grounds for his opinion, of which Mr. Samuel Wilmot appears to be ignorant; at all events, he has not alluded to them. From my knowledge of Mr. Sheasgreen and from the character he bears among his neighbours, I am very unwilling to believe, without some show of proof, he would resort to deception to cover up anything that happened, or knowingly make misstatements to deceive me or the Department as to the loss of 1877. Besides, he could not possibly do these things without the knowledge and connivance of Overseer John Hogan, and this man, at least, is quite incapable of such conduct, as the record of his whole life shows. Therefore, I think Mr. Wilmot has been hasty in jumping to this harsh conclusion. I have seen more of this man than Mr. Wilmot has, and I have seen much

more of the Hatching-House while under his care. Had I seen anything in his conduct to lead me to the conclusion Mr. Wilmot expresses, I would not have hesitated one moment to report the facts to you, and I would have gone further than Mr. Wilmot has done—I would have strongly urged his dismissal—for no establishment could succeed under the charge of so dishonest and unreliable a man as Mr. Wilmot describes. As to his competency to manipulate the fish, to impregnate the ova, and to take proper care of the ova in the troughs, I think Mr. Wilmot will admit that he was the best man then available for these services, having had more practice and experience than anyone that could then have been obtained. His practical experience of the house through all its past troubles, now qualifies him for its care much better than any other man; and I have not a shadow of doubt of his intense wish to succeed in overcoming the difficulties that have beset him. It should be borne in mind that Mr. Sheasgreen has never seen any other hatching house, and had to follow the directions given him by the Messrs. Wilmot and myself, and I have no reason to doubt that he has done so with more than ordinary intelligence and care. I feel that in thus giving you my opinion of Mr. Sheasgreen, in opposition to that expressed by Mr. Wilmot, I have done only scant justice to a man who has no opportunity to defend himself against very grave and damaging suspicions, expressed, as I believe, hastily and without sufficient grounds.

With these remarks on Mr. Wilmot's report, I will now, with your permission, state my present opinion of the cause that has led to the ill-success of the Hatching-House, and my reasons for believing that this cause has already been partially, and can be entirely removed. As this opinion has been arrived at after much careful observation and anxious thought, I submit it as worthy of consideration.

I will premise by a short *résumé* of the facts as shown by the records of the Department. Late in the fall of 1873, the house was only partially finished, and many of the ova laid down that fall were lost from exposure to cold and want of proper conveniences for caring for them. During the summer of 1874, the House was completed, and means provided to keep up a suitable temperature. That fall, Mr. A. B. Wilmot laid down in the troughs 1,500,000 ova, which continued to progress favourably until the month of May, 1875, just as the young fish were bursting the shell. At that time, a sudden and great fatality befel the ova,—so great that only 150,000 young fish were produced. In the fall of 1875, owing to extensive freshets, the dam of the retaining pond gave way, and all the parent fish escaped before they were ripe for spawning. By great exertions, Mr. A. B. Wilmot succeeded in getting some 65,000 ova, by going far up one of the tributaries of the South-West. After having laid these down in the troughs, Mr. Wilmot was removed to Bedford, and, at the request of Mr. Whiteher, I consented to do the best I could to supply his place; Mr. Sheasgreen having the immediate care of the house. The ova then in the troughs were hatched out with very small loss, and in the spring of 1876 the young fry were successfully planted according to your directions. In the summer of that year, the dams were rebuilt, and in the fall, 610,000 ova were laid down, which continued to do exceptionally well until the latter part of March, 1877. Between that time and the 9th of April, a loss occurred, amounting to 50 per cent of the whole number. This loss occurred during a very heavy freshet, which deposited a great quantity of black sediment on the eggs. Only 318,000 fry were hatched and distributed. Now, in all this time, from 1874 to 1877, Mr. Samuel Wilmot paid but three or four flying visits to the House, and had no sufficient opportunity of investigating facts or making careful observations. He never gave me any notice of his visits, consequently I had no opportunity of advising with him, or even of taking his instructions. Neither did he communicate with me by letter.

When the first great loss occurred in 1874-5 Mr. A. B. Wilmot attributed it to the foul water and its action on the zinc trays. From certain facts stated in his reports to you, there were some strong grounds in support of his opinion. So firmly convinced was he of the correctness of this opinion, that when he found the same character of water at Bedford, he urged your Department to furnish him with earthenware trays, and he also applied filters that intercepted the sediment before it reached the

eggs. He was very successful with these appliances and consequently more firmly convinced that zinc trays were not suitable for the Miramichi House. But from the above *resumé* you will observe a fact that operates strongly against his conclusion. This fact is, that in 1876-7, the loss occurred on both zinc and earthen trays, although less on the latter. You will also observe another fact that operates even more strongly against his conclusion—that is, when only a small number of eggs were in the troughs, they did well and no unusual loss occurred. Now, these two facts struck me with great force, and I could not but see that Mr. A. B. Wilmot's theory did not meet these facts. If the peculiar nature of the water was the cause of the loss, why did it not kill *all* the eggs—why did a portion escape out of the large crops of ova, and why did all the small crops escape? These questions caused me much anxious thought. Mr. Samuel Wilmot, not having my opportunities for observation, hastily concluded that neglect was the cause of loss, but I had strong reasons for believing otherwise. In the course of my thinking over all the circumstances, another fact in the *resumé* struck me with the force of a sledge hammer—and that fact is that the great losses in the large crops of ova occurred just before the young fish were ready to emerge from the shell! Here a new direction was given to my thoughts, and I was led to suppose that at this particular time the sediment did the mischief. This was my belief up to April last, when I accompanied Mr. Samuel Wilmot on his visit to the Bedford House. The first thing that struck me was the greater body of water flowing out of his tank over the eggs, and I called Mr. S. Wilmot's attention to it, and asked him if the small supply of water might not have had something to do with our trouble. He replied that our pipes ought to supply all the water needed. When next I saw our House I was still more forcibly struck with the difference. Our streams were small, and the water flowed very sluggishly over the eggs. Suddenly, as if by inspiration, it became clear to me, that at the time when our large crops of ova were about bursting the shell, the pipes did not supply water enough to give them the air they needed. Previous to this, and before the act of breathing, the embryos do not need so highly aerated water, and consequently the ova would do well until the time came when more air was wanted. Now, a small sluggish stream flowing through the troughs would give only a certain quantity of air, and that quantity was not enough to supply the wants of hundreds of thousands of embryos struggling in their shells. The consequence would be that suffocation would commence and continue until enough had died to give the remainder the air they needed to sustain them. This is precisely what occurs in the natural process. While the eggs are developing under the ice in winter, they need but slightly aerated water, but when they are nearly hatched and need the air, in the months of May or April, the ice breaks up, the streams rise, the flow of water is greatly increased in the rivers and streams, and the water becomes much more highly aerated, and so supplies the wants of the now breathing embryos. This want of sufficient water flowing from the supply tank to the troughs was, I am now persuaded, the radical trouble with our House, and another consequence of this deficient supply was that the flow would not carry off the sediment, and hence the great accumulation on the ova.

I cannot help thinking that Mr. Samuel Wilmot must have come to this conclusion himself, and must have had doubts of the correctness of his opinion, that incompetency, neglect and deceit were the causes of our loss. Else why did he, this season, order the supply dam to be raised over a foot? Why did he have the pipes over-hauled and made tight? the result of which is that there is now nearly double the quantity of water flowing over the eggs, but still not such full and rapid streams as the Bedford troughs have. This, Mr. A. B. Wilmot and myself tested when he was there with the ova from the River Philip—while it took 30 seconds for one of our streams to fill a bucket, one of his streams filled the same bucket in 19 seconds. And these full rapid streams, passing over his ova, are, in my opinion, the cause of his great success in the Bedford House. He has treated his ova just as he did in Miramichi, and he considers the water of the latter house just as good as that of the former. All the facts contained in the *resumé* above given bear out the conclusion at which I have arrived from my experience of the Miramichi House, and my observa-

tions of the Bedford House strengthen it. When we get the quota of 200,000 from the Restigouche House, there will be 710,000 ova in our troughs, which number, although not so large as I could wish for a rigid test, will give me the means of either verifying the correctness of my conclusion, or proving it erroneous. I am, of course, very anxious about the result, and yet I have confidence enough in Mr. Sheasgreen to leave the care of the house in his hands. If the result is a success, I think no doubt can remain as to the cause of past failures, and no fears need be entertained as to future success. But yet, in my humble opinion, it will be necessary to increase the flow from the supply dam, before it will be prudent to lay down a million and a half or two million ova. With a sufficient flow of water, I see no reason why this house, with its great amount of trough room, cannot just as safely hatch 2,000,000, as I feel sanguine it will, this winter hatch 710,000.

The interest I feel in the success of this house must be my excuse for the length of this letter, and I hope when Mr. Samuel Wilmot considers all the facts that I have stated, he will agree with me in the opinion I have already expressed in a previous letter,—that we have all been looking for a remote and hidden cause of failure, while the real cause has been plainly before our eyes, but has been overlooked.

Recent advices from Mr. Sheasgreen inform me that the ova are doing well, with very small loss. About the 10th instant, I purpose going to Restigouche, to get the eggs from that house, and see that they are carefully and properly laid down, as I wish this winter's test of the house to be a crucial one.

Respectfully submitting to your consideration my conclusion and the reasons that have led to it,

I have the honour to be, Sir,
Your obedient servant,

W. H. VENNING,
Inspector of Fisheries, N.B.

FISHERIES OFFICE, ST. JOHN, N.B.,
November 6th, 1877.

W. F. WHITCHER, Esq.,
Commissioner of Fisheries,
Halifax.

SIR,—When in Newcastle, on Monday 29th ult., Mr. Hogan informed me that under instructions from Samuel Wilmot, Esq., he commenced fishing for salmon early in September, with the net I had made for catching shad (see my report of 1st August), which I sent to him for the use of the Hatching-House. By the middle of October he had secured over 350 parent fish, a larger number than has ever yet been taken for manipulation on the Miramichi. Part of these were placed in the pond, and part in the reception house, where a good flow of water continually passed over them. In a short time the greater part of these, in both places, began to show marked evidence of disease; large blotches of fungus appeared on their bodies, which spread rapidly and ended in the fish becoming hard and finally dying. On opening several of those that died the ova was found to be congested into a hard mass. As this disease appeared to be spreading rapidly, and affected the healthy fish, Mr. Sheasgreen was obliged to liberate them, retaining only such as gave promise of maturing their ova.

Mr. Hogan continued his efforts to procure a further supply, until all the females taken were spent, when he ceased operations, being satisfied that the fish had all spawned.

These facts I related to you in Chatham, on Tuesday evening, 31st ult., and asked your permission to make another effort, hoping that some later run females might yet be secured.

In accordance with your instructions, I accompanied Mr. Hogan and Mr. Sheasgreen up the main North West, and swept several of the spawning beds on the

31st ult. We took twelve female fish, but every one of them had spawned, and no hope remained of increasing our supply of ova from the Miramichi.

Acting on your telegram of 1st inst., Hogan, Sheasgreen and myself went to Bathurst, where Overseer Hickson met us, he having made all the necessary arrangements for sweeping the spawning beds of the Nepissiguit River; Mr. Nicholson, the lessee, kindly giving his permission to do so. We spent the whole of Friday, 2nd inst., in efforts to capture fish in these pools, but the rough and rocky bottom of this river rendered it impossible to use the sweeping net, the fish enclosed escaping under it in every instance. We made strenuous exertions until late in the evening, when a violent storm of rain and sleet set in and rendered it impossible to continue the labor. We then held a conversation with Overseer Hickson as to the possibility of using a bar-net and pound with any hope of success; but both he and the canoe-men agreed in opinion that as the fish were on their spawning beds and not moving up or down the river, there was no reasonable prospect of succeeding in capturing them by that mode. As the storm continued with increasing violence, we were obliged to return to Bathurst, completely drenched and worn out with our unsuccessful labour. The next morning was very cold, and ice was forming rapidly, which precluded any hope of securing the ova, even if we succeeded in capturing the fish. Under these discouraging circumstances we all concluded that any further efforts would incur only a useless expense.

Mr. Sheasgreen informed me that, out of the large number of fish taken in the Miramichi, he has laid down in the hatching troughs but 310,000 impregnated ova. He was obliged to liberate all but 60 females and about 75 males; of the former, many were small fish, and a number were hard and would not yield their eggs.

I made searching enquiries of the men employed in catching the fish, as to the cause of the fungus growth, and was informed that a great many were thus affected at the time of their capture. I also enquired of old fishermen if they could give any reason for this, and was told that some seasons a great many salmon shew these signs of disease, but they were not agreed as to cause. Some thought it resulted from injuries received in the set nets during their ascent of the river; others were of opinion that the cause was rough handling in capturing them and conveying them to the hatching house, while others thought they were caught too early, and kept too long in confinement. This last opinion is, to some extent, strengthened by Mr. Mowatt's experience last year, when several hundred fish taken by him early in the season, and kept in confinement, showed precisely the same symptoms, and had to be liberated before they were ripe for spawning. Both Mr. Hogan and Mr. Sheasgreen assured me that all care was used to handle and transport the fish as tenderly as possible, and that a very large number of them was affected by the fungus growth at the time of their capture. This statement is borne out by the fact that of the twelve taken by me under your instructions, eight were more or less diseased, and covered by large patches of white fungus.

It is much to be regretted that the quantity of ova laid down is so small, as I am very sanguine that the improvements made this season in the water supply of the hatching house, will effectually remove the difficulties hitherto experienced at this establishment. During the past summer the supply pipes have been laid bare; several extensive leaks have been stopped; the head of water in the feeding dam has been raised over a foot; the hatching troughs have been made tight; and at the time of my visit, on the 29th ult., a much more rapid stream of water was discharged from the reservoir into the several hatching troughs. These improvements will, I think, settle the question whether there is anything in the water unfavorable to the healthy development of salmon ova. If this question is once decided favorably, I see no reason why, with better arrangements for procuring the parent fish, this establishment should not be as successful in its results as any other hatching house now in operation.

During the last summer, Samuel Wilmot, Esq. took the entire control and management of the House, since which time, although I have repeatedly written to him on the subject, I have had no reply. When I was in Newcastle, on the 29th October

last. Overseer Hogan informed me that, under instructions from Mr. Wilmot, he commenced fishing for salmon early in September. By the middle of October he had secured over 50 parent fish, a larger number than has ever yet been taken for manipulation on the Miramichi. Part of these were placed in the pond and part in the reception house, where a good flow of water continually passed over them. In a short time the greater part of these, in both places, began to show marked signs of disease. Large blotches of fungus appeared on their bodies, which spread rapidly, and ended in the fish becoming hard and finally dying. On opening several of those that died, the ova was found to be congested into a hard mass. As this disease appeared to be spreading rapidly, and affected the healthy fish, Mr. Sheasgreen was obliged to liberate them, retaining only such as gave promise of maturing their ova.

Mr. Hogan continued his efforts to procure a further supply until all the females taken were spent, when he ceased operations, being satisfied that the fish had all spawned.

These facts I related to the Commissioner in Chatham, on the 30th October, and I asked his permission to make another effort to procure parent fish, hoping that some later run females might be secured.

In accordance with his instructions, I accompanied Mr. Hogan and Mr. Sheasgreen up the main North-West and swept several of the spawning beds on the 31st of October. We took twelve female fish, but every one of them had spawned, and no hope remained of increasing our supply of ova from the Miramichi.

Acting on the telegram of the Commissioner dated 1st November, Hogan, Sheasgreen and myself went to Bathurst, where Overseer Hickson met us, he having made all necessary arrangements for sweeping the spawning beds of the Nepissiquit River. Mr. Nicholson, the lessee, having kindly given permission to do so. We spent a day in efforts to capture fish in these pools, but the rough and rocky bottom of this river rendered it impossible to use the sweeping net, the fish enclosed escaping under it in every instance. We made strenuous exertions until late in the evening, when a violent storm of rain and sleet set in, and rendered it impossible to continue the labour. We then held a consultation with Overseer Hickson as to the possibility of using a bar net and pound with any hope of success; but both he and the canoe-men, all of whom were old fishermen, well acquainted with the river, agreed in opinion that as the fish were on their spawning beds, and not moving up or down the river, there were no reasonable prospect of capturing them by that mode. As the storm continued with increasing violence we were obliged to return to Bathurst, completely drenched and worn out with our unsuccessful labour. The next morning was very cold and ice was forming rapidly, which precluded any hope of securing the ova, even if we succeeded in capturing the fish. Under these discouraging circumstances we all concluded that any further efforts would incur only a useless expense.

Mr. Sheasgreen informed me that out of the large number of fish taken in the Miramichi, he laid down in the hatching troughs but 310,000 impregnated ova. He was obliged to liberate all but 60 females and about 75 males; of the former, many were small fish and a number were hard and would not yield their ova. As soon as the disease became apparent, both Mr. Sheasgreen and Overseer Hogan wrote and telegraphed to Mr. Samuel Wilmot and required his immediate presence; but he either went or gave them any advice by letter. I was not informed of the trouble until it was too late to take any measure to ameliorate it; as Mr. Wilmot gave explicit orders that no instructions except his own were to be followed.

It is much to be regretted that Mr. Wilmot did not himself visit the House at the time the fish showed these not unusual signs of disease, as it would have extended his experience and given him the means of forming a judgment in a case that occurs not unfrequently on our rivers. At present he knows, from actual experience and personal observation, nothing about the nature of the disease, the appearances it presents, nor the causes that lead to it, and hasty theorizing from very insufficient data has more than once led Mr. Samuel Wilmot into great errors of fact and judgment. His practical experience has been confined to the House on Wilmot's Creek

in Ontario, where the habits of the fish are so essentially different from those of the fish in our rivers that any general conclusions drawn from the former must necessarily be erroneous when applied to the latter. Our fish enter the rivers as early as May and June and their ova and milt are developed while in the rivers. The Ontario fish do not enter his creek until late in October, and then they are fully ripe for spawning, and as soon as they are captured, or at furthest in a few days after, they are ready to be manipulated. Consequently his fish are but a few days in confinement and rarely or never become diseased. Mr. Wilmot does not appear to possess that caste of mind which enables him to reason abstractly and to take into account all the varied circumstances which are necessary to be considered before a correct judgment can be formed. If, added to this mental defect, he will not take the trouble to acquire a personal knowledge of the ordinary and exceptional difficulties that may arise, it is quite plain that his conclusions are much more likely to be erroneous than correct. I feel it my duty to make these observations because I know that in three or four instances his conclusions, drawn from his experience at Wilmot's Creek and applied to our rivers, have been ludicrously erroneous, while the consequences have been seriously disastrous.

I made searching enquiries of the men employed in catching the fish, as to the cause of the fungus growth, and was informed that a great many were thus affected at the time of there capture. I also enquired of old fishermen if they could give any reason for this, and was told that some seasons a great many salmon show these signs of disease, but they were not agreed as to the cause. Some thought it resulted from injuries received in the set nets during their ascent of the river; others were of opinion that the cause was rough handling in capturing them and conveying them to the Hatching House; while others thought they were caught too early and kept too long in confinement. This last is my own opinion. I cautioned Mr. Wilmot against this error, because Mr. Mowat's experience, the previous season, went to show that long confinement will result in a growth of fungus and the same hardening of the body and congestion of the ova as was experienced last season on the Miramichi.

As there were but 310,000 ova in the House, and as I was very desirous of testing my conviction that want of sufficient water was the cause of our former losses, I telegraphed the Commissioner to be allowed to get 200,000 ova from Bedford, and the same quantity from Restigouche, these Houses having each a surplus of ova, their managers having followed their own experience as to the proper time of capturing the parent fish, unembarrassed by the erroneous opinions of Mr. Samuel Wilmot. Having obtained his permission, I communicated with Mr. A. B. Wilmot, of the Bedford House, and by arrangement met him at Moncton Station on the night of the 15th November. He accompanied me to Newcastle, to assist in carefully handling the ova, which were carefully packed in four boxes provided for the purpose. We were met at Newcastle Station by Overseer Hogan, with a good spring waggon, and immediately left for the Hatching House, where we arrived on the morning of Friday, the 16th. Mr. Wilmot assisted in laying down the ova, which looked well and gave every indication of being healthy and in good condition.

Mr. A. B. Wilmot inspected the feeding dam, measured the height of water in the tank, and found that a much better head and flow of water had been obtained, in consequence of changes made by order of Mr. Samuel Wilmot, during the last summer. The supply pipes had been laid bare; several extensive leaks had been stopped; the head of water in the feeding dam had been raised over a foot; the hatching troughs had been made tight, and a much more rapid stream of water was discharged into the several hatching troughs. Indeed, there was every reason to believe that Mr. Samuel Wilmot had, at last, become convinced that the carelessness and incompetency which he had charged upon Mr. A. B. Wilmot and Mr. Sheasgreen, were due to himself in the original arrangement of the works. But, of course, he can hardly be expected to admit so damning a fact, which, however, the following true statement will demonstrate. When first laid down, according to the directions of Mr. Samuel Wilmot, the pipes leading from the supply-pond to the reservoir in the

hatching room, consisted of only two pipes of three inches each in diameter. To expect to keep up a head of water in a tank, into which only two streams of three inches diameter each, flowed, while sixteen streams, of one inch each, flowed out, displays a total ignorance of the first principles of hydraulics and hydrostatics. So great was this original error, that Mr. A. B. Wilmot was compelled to lay down two additional pipes of three inches each, which he did in spite of Mr. Samuel Wilmot's protestations that "there was water enough." Even with these additional pipes, the supply was not sufficient, and this last summer the supply dam was raised, as above stated, over a foot, which improvement, however, does not give much more than half the supply Bedford House has, and not much more than one-fourth of that which the Restigouche House has. In the former tank there is a waste-pipe which discharges a surplus of nearly half as much as the whole supply of the Miramichi House, while at Bedford, pipes of $\frac{5}{8}$ -inch diameter supply the troughs with more water than inch pipes do in Miramichi. This we proved by actual measurement; while it took thirty seconds for one of our inch streams to fill a bucket of twelve quarts, one of the Bedford $\frac{5}{8}$ inch streams filled the same bucket in nineteen seconds; a fact that shows, beyond a doubt, that whatever other defects the Miramichi establishment may labour under, want of water is the radical and most serious one.

Mr. Samuel Wilmot gave strict orders that the ova from Restigouche should not be moved until the motions of the embryos were plainly visible. Though I thought, and still think this another error of judgment from Mr. Wilmot's limited experience in moving ova, I strictly followed his orders, and when Mr. Mowat informed me that the embryos moved, I left St. John on the night train and arrived at Dee Side on Saturday, 19th January, with proper boxes for conveying the ova to Miramichi. On the afternoon of Monday we packed 204,000 ova, conveyed them by sled to Metapedia Station, went by the night express to Newcastle, were met by Overseer Hogan with a suitable conveyance, and reached the Hatching House by 4:30 a.m. on the morning of Tuesday, 22nd January. We immediately transferred the ova to the hatching troughs; they turned out exceedingly well, having stood the journey and the double operation of packing and unpacking much better than I expected. Not over 2,000 had died, and when I left the House on Tuesday morning, all looked well and promising. The ova from Bedford had done quite as well as those previously laid down, and the percentage of loss had been, according to Mr. Sheasgreen's memoranda, quite small. Subsequent advices from him informed me that he has since lost about 2,000 more of the Restigouche eggs, which I attribute entirely to Mr. Samuel Wilmot's error in judgment in delaying their removal to a time when the greatest danger of loss was to be apprehended. However, on the whole, the operation has been successful, and the loss not more than might have been expected.

There are now in the House 710,000 healthy ova. The embryos are visible in all the eggs, and most of them show signs of life and motion. From present appearances I confidently anticipate a successful issue. If anything should happen, I have no hesitation in saying it will be mainly in consequence of the limited supply of water flowing over the ova at the time when they burst the shell, and will require plenty of aerated water to enable them to breathe. Although the supply is now nearly double what it was when the last great loss occurred, still it is not sufficient, in my opinion, to ensure perfect safety to so large a mass of breathing fish. I am in hopes, however, that it may prove sufficient to hatch and nurse the number now in the troughs; but I must again repeat my conviction that, before it will be safe to lay down a million ova in this house, the supply of water must be largely increased. I have expressed this conviction to Mr. Samuel Wilmot, and, though he has not even vaguely swelled the receipt of my communication, I trust he will see the necessity of having the requisite alterations made before next season passes. And I also trust we will now see the necessity of paying more personal attention to this House, which has some other important and serious drawbacks to its success. I am of opinion that the stream is not the best that could have been selected, but the works being there, it is of the very first importance that no efforts should now be spared to overcome, by close personal attention, the errors in judgment originally made, and not to shirk the

responsibility of his own errors by throwing the blame of "carelessness and incompetency" upon men who have shown much more solicitude for the success of the House than he appears to have done.

In thus stating my convictions with perfect frankness and plainness, I wish to observe that no ill-feeling towards Mr. S. Wilmot has any share in dictating my remarks. That gentleman possesses much ability and perseverance, and deserves the highest praise for his efforts and success in bringing pisciculture to its present successful and promising state in Canada; but somewhat different habits of thought, and a more extended acquaintance with the habits of our *Salmo Salar*, are necessary to enable him to be as successful in their artificial propagation as he has been with the *Salmo Wilmoti*, a variety very different in its habits and requiring a different mode of treatment, especially in the management of the parent fish.

As Mr. Wilmot has assumed the "whole and absolute management of the works," and is rather jealous of any interference with, or departure from, his stereotyped ideas, gained from his experience with the inland establishment at which the *Salmo Wilmoti* is propagated, I shall, in future, take no action in fish-breeding without clear and explicit orders from the Department, as I do not care to be held responsible for Mr. Wilmot's theories, nor for his neglect of a duty which devolves upon him, and for the proper performance of which he is paid, while hitherto all my labour and anxiety and best efforts for the success of this house have been gratuitous, except, indeed, liberal payment in slander and abuse.

Respectfully submitted,

W. H. VENNING,
Inspector of Fisheries, N.B.

P.S.—Copy of this Report has been sent to Mr. Wilmot, and I think it would be advisable for him to visit the House as soon as possible, in order that he may see for himself the truth of it, so that no malicious falsehoods may mislead the Minister in the future, as has been done in the past, with regard to the veracity of my statements in connection with this establishment.

W. H. V.

SAINT JOHN, N.B., 31st Dec., 1877.

Hon. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit the following report of proceedings in connection with the Miramichi Fish-Breeding Establishment, from 31st December, 1876, to middle of June, 1877, when Samuel Wilmot, Esq., assumed its entire control and supervision.

The ova laid down in the fall of 1876 continued to progress favourably with very small loss, until the latter part of March, 1877, when a heavy freshet set in; large deposits of black sediment covered the eggs, and a very serious loss by addling occurred. On being informed of these facts by Mr. Sheasgreen, the care taker of the establishment, I supposed that this loss was occasioned by some substance in the water, which acted on the zinc of which the trays were made, and I immediately instructed him to transfer all the eggs from zinc trays to earthen ones, obtained from Mr. A. B. Wilmot of Bedford House, and to reduce the number on these, so as to give them more room, thinking they would do better if but a single layer of eggs was on the bottom of each tray, as this would prevent so much sediment from adhering. He did this, but an alarming loss still continued, and on the 7th April I went to Miramichi to see if anything could be done to remedy this serious and unexpected misfortune. On arriving at the Hatching-House, I found the freshet still very high, and the water loaded with an amount of sediment that completely covered the

eggs, rendering it necessary to wash them every day. This had continued for ten days, and the loss in that time had more than trebled the total loss since the eggs were placed in the troughs. The deaths had been greatest on the zinc trays, next on the gravelled ones, and was very serious indeed. I carefully measured the trays and found as follows :—

217 earthen trays, each containing 1,500	325,500
106 saucers, each 350	37,100
3 double zinc, each 3,000	9,000
2 wire, each 3,000	6,000
	377,600

Showing that 4^o per cent of the whole number laid down had perished, while the daily loss still going on was very considerable.

I immediately apprised you of all these facts in my report, dated 11th April, and Samuel Wilmot, Esq., was sent from Ontario to ascertain the causes that had led to this disastrous loss. I met Mr. Wilmot at Newcastle, on the 16th April, and with him visited the House. The freshet was then subsiding and the water running much clearer than when I saw it on the 7th.

All the facts above recorded were stated to Mr. Wilmot and every occurrence known to me was fully detailed, to enable him to form a correct opinion as to the cause of this unfortunate calamity. He measured the trays and found as follows :—

217 earthen trays, each 1,400.....	303,800
4 zinc do do 1,400.....	5,600
2 wire do do 850.....	1,700
106 earthen saucers do 180.....	19,080
	330,180
Deduct some scant trays.....	4,180
	226,000

Showing a loss between the 8th and 16th April, of 51,600 eggs.

As the freshet fell and the water ran clearer the daily loss grew smaller, until about the last of April, up to which date only about 7,500 more were lost, and from that time until the fish emerged from the shell early in May, the loss did not exceed 500, leaving 318,000 healthy young fish in the troughs.

These were nursed without further loss, and early in June were distributed as follows :—

North-West Miramichi.....	50,000
South-West do	50,000
Little South-West.....	58,000
Sevogle	20,000
Bartibog	20,000
Tabusintac	20,000
Burnt Church.....	20,000
Napan River.....	20,000
Black River.....	20,000
Salmon River, Kent Co.....	20,000
Shediac River West'd Co.....	20,000
	318,000

The transportation, principally by horse and waggon, was made without any appreciable loss as the weather was cool and favourable to the purpose.

The report made by Mr. Wilmot attributes the loss to want of judgment and carelessness on the part of Mr. Sheasgreen. In my remarks on this report submitted

to you, I have given my reasons for dissenting from the conclusions arrived at by Mr. Wilmot, and have also given you my opinion of the real cause of the two disasters that have befallen this house. The first occurred when it was under the care of Mr. A. B. Wilmot and the superintendence of Samuel Wilmot, Esq.; the second one occurred under the care of Mr. Sheasgreen and my superintendence, undertaken at the earnest wish of the Commissioner of Fisheries, while Mr. Samuel Wilmot was busily engaged at Sandwich, and Mr. A. B. Wilmot at Bedford.

Of course, it is an easy solution of the difficulty to attribute it, in both cases, to incompetence and negligence, as Mr. Wilmot has done. Neither of the accused parties has had any opportunity given him of rebutting this charge, nor has Mr. Wilmot given any proof of its truth, further than to state that such is his opinion, based upon a very limited induction. As I have had much better opportunities of judging in this matter, and a much more intimate knowledge of the stream that supplied the house, and its peculiarities, I am forced to a conclusion entirely different from the one expressed by Mr. Wilmot, and I have given you my reasons for believing that carelessness and want of judgment were shown in the original arrangement of the house, and not in the subsequent management of it.

In my opinion, based upon a careful consideration of the facts recorded and detailed to you in my special letter on this subject, the real cause of all the trouble has been an inadequate flow of water from the tank into the hatching troughs, owing to the insufficient head in the supply pond, or to the incapacity of the supplying pipes to keep the water at a sufficient height in the tank. I have stated this opinion to Samuel Wilmot, Esq., and expressed my belief that, in order to make this establishment successful, it will be necessary to largely increase the supply of water, either by raising the head in the pond or by increasing the capacity of the pipes that lead from the pond to the reservoir, in the hatching-room. I think it my duty to record my conviction that, until this is done, the same loss will occur in future whenever a large number of ova are laid down, because the flow through the hatching troughs is not sufficient to supply the requisite aerated water to a large number of ova in an advanced stage of development. If this defect is remedied, I see no reason why this house should not succeed as well as any other now in operation.

During last summer, Samuel Wilmot, Esq., took the entire control and management of the house, and I trust that, with his superior knowledge and experience, and with the change I have pointed out as absolutely necessary, the difficulties that have beset this establishment will be overcome.

I have the honour to be, Sir,

Your obedient servant,

W. H. VENNING,

Inspector of Fisheries, N.B.

NOTE.—As a local paper in Miramichi has charged me by name with "fraud" and "dishonesty" in my official reports in connection with this establishment, and has stated that Mr. Wilmot's report would substantiate these charges, I beg to be allowed here to give an indignant and unqualified denial to them, and to state that not one word in Mr. Wilmot's report can, by any possibility, be construed to reflect upon my official integrity in this or any other connection. All my reports have been true and correct, so far as the facts were made known to me. They were made without loss of time, as soon as I had become aware of them. They were detailed with all the circumstances attending them, with strict fidelity and in all good faith. They are now on record in the Department and speak for themselves, or are open to the severest scrutiny. I may mention that I have always taken the greatest interest in the success of this House, because I know that the salmon fisheries of the river sadly need its assistance to neutralize the many causes that are at work to reduce its stock. This interest in the House, and this desire to see it succeed, induced me to

undertake its superintendency at a time when no one better qualified was available for the work. This did not belong to my legitimate duties, but was undertaken as a "labour of love," at the earnest request of the Commissioner. It added very much to my onerous duties, both physical and mental, for which I have never asked nor received one cent of additional remuneration; but I have received, instead, much slander and abuse from those who were entirely ignorant of all the facts connected with the Establishment, and all the difficulties that have hitherto beset its successful operation. This much I feel it due to myself to say in denial of charges that have not even the semblance of probability to sustain them, but are calculated and intended to do me great injustice. All these facts are known to you, and I trust that this plain statement will receive the *imprimatur* of the Department.

W. H. V.

FISHERIES OFFICE, ST. JOHN, N.B.,

To the HON. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

31st December, 1877.

SIR.—I have the honour to acknowledge the receipt of a copy of Mr. Samuel Wilmot's report on the great loss of eggs in the Miramichi Hatching-House, between the last of March and the first of May, 1877, on which I beg to make the following remarks.

I respectfully ask your consideration of these, as I have had much better opportunities than Mr. Wilmot has had of knowing the peculiarities of the stream which feeds the hatching troughs, and am better acquainted with Mr. Sheasgreen, the caretaker of the house, who bears a high character among his neighbours.

1st. Mr. Wilmot bears witness to the excellent state of the establishment, both internal and external, and in this he corroborates all my reports.

2nd. I must express my very decided dissent from Mr. Wilmot's opinion that "the breeding troughs and hatching troughs were well supplied with good living water." In my opinion, based on comparison with the houses at Dee Side, Matapedia and Bedford, Nova Scotia, I consider the flow of water through the troughs of the Miramichi House quite insufficient, and, this, I am fully persuaded, was the radical cause of the trouble. While the flow from one of the troughs in the Bedford House filled a bucket in 17 seconds, and from one in the Dee Side House in 19 seconds, that from one of the Miramichi troughs required 30 seconds to fill the same bucket, showing that the supply of water in the latter house is not much more than one-half that in the former two.

3rd. Mr. Wilmot errs in saying that "he was enabled to see the state of the water during the time of a freshet." At the time he considers so opportune for this purpose the freshet had greatly subsided, and the stream was comparatively clear and pure. Had he seen it on the 9th April, and previously, instead of on the 16th, he would scarcely have written his remarks on its purity and freedom from sedimentary matter. Even on the 16th April, six days after the water had fallen several feet, he described it as "dark or porter coloured." How pure or free from sedimentary matter such water could be, you are as well able to judge as either Mr. Wilmot or myself. I positively affirm that when I saw the water on the 9th April, it was as described in my report of the 11th, most foul and dirty, and very different from the appearance it presented on the 16th. Therefore, I submit that Mr. Wilmot was sadly in error when he says he "satisfied himself with regard to the unexceptionable character of the water," and pronounced it for fish-breeding purposes equal to any other where similar establishments are now being carried on successfully.

4th. Mr. Wilmot's method of measuring the trays on the 16th April was precisely the same I adopted on the 9th when I reported 377,600 ova. He found but 326,000, showing that between the 9th and 16th the loss had been 51,600, a fact that ought, in my opinion, to have made him less hasty in attributing it to carelessness and deception on the part of Mr. Sheasgreen.

5th. The difference between the number of eggs laid down in the autumn of 1876 and the actual quantity on hand at the time of Mr. Wilmot's visit on 16th April, 1877, was fully reported by me in my letters dated 11th and 13th April, and no attempt was made, so far as I am aware, to keep back any facts, or make any false statements to cover up facts.

6th The opinion I then held as to the cause of this disaster was honestly given in the letters above referred to, and this opinion was strengthened by the testimony of Mr. A. B. Wilmot, who had met with a similar loss in the spring of 1875. I have since then had reason to change that opinion, and to form another, which with the causes and reasoning that led to it, will be fully given ere I conclude these remarks. Mr. Wilmot has striven much more ingeniously to suggest his assumption of carelessness and deception, than to ascertain the real cause of the disaster.

7th. In saying that the loss was of an "extraordinary nature," and that the statements of the number of eggs on the trays were conflicting, Mr. Wilmot displays more disingenuousness than I like to see in a candid searcher after truth. He knew that just such a loss had before occurred in this house, under precisely similar circumstances when it was under the care of his nephew, and he knew that the only statement of the number of eggs that conflicted with mine and Mr. Sheasgreen's was one made by Messrs. Snowball and Smith, who could not possibly have made a correct one by their mode of counting. Knowing these things, it seems to me that he was more bent on supporting his foregone conclusion of carelessness or incompetency than on discovering and removing the real cause of the catastrophe that had now, for the second time, befallen this house.

8th. I entirely differ from Mr. Wilmot in his conclusion "that the true cause of the difficulty and loss was incompetency or neglect, or both, on the part of the officer in charge of the building," and I am fully persuaded that no deception was resorted to by him to cover up the actual state of affairs. I respectfully submit that nothing Mr. Wilmot states bears out this conclusion, nor when the facts are fairly considered, even points to it. Before Mr. Wilmot made such grave charges against one who has always borne the character of an honest and truthful man, I think he should have taken evidence under oath.

Overseer Hogan, Mr. Sheasgreen and myself were present, and could all have testified to the entire truth of all the statements made, either to Mr. Wilmot or to the Department. In regard to Mr. Sheasgreen's incompetency to count the eggs when laid down, I may state that he followed precisely the same method as Mr. Wilmot himself did. In impregnating the ova, he did precisely as he was taught to do by Mr. Wilmot himself, and he did a large portion of the work in the presence of Mr. Mowat and myself. I thought he was exceptionally careful in doing it well, and Mr. Mowat expressed the same opinion. Whether neglect was afterwards practised or not, of course I cannot positively say, but I have the very strongest reasons for believing the contrary. Mr. Sheasgreen was particularly anxious to succeed, as his prospect of being continued in charge depended on his successful management of the establishment. He was never absent from his post, and, at the time of the freshet, was in the House day and night. Mr. Wilmot, however, thinks neglect must have been practised, "as it would be almost impossible, even with ordinary care, that the enormous loss of fifty per cent of the whole should take place in so short a time, and at this advanced period of incubation, when the embryos had become almost perfect fry." It is very surprising to me that Mr. Wilmot's active mind and large experience could suggest no more rational and fair conclusion. But, not content with charging this man with incompetency and neglect, Mr. Wilmot concludes that, in addition to these, deception has been resorted to to cover them up. On this subject I think I can speak positively, and I have no hesitation in expressing my unqualified disbelief of this grave charge, because it could not possibly have been practised without my knowledge, except with the connivance of Overseer John Hogan, and this man, at least, is quite incapable of such conduct, as the whole record of his life proves.

9th. Mr. Wilmot alludes to the previous loss sustained by this House, when under his nephew, and attributes it also to "negligence and want of attention to the work." As I had no official connection with the House at that time, I can say nothing positively on this loss. Mr. A. B. Wilmot's reports of his management are on record, and give his opinions as to its cause. But I think Mr. Samuel Wilmot here shows how much easier it is to support a foregone conclusion, than to reason on facts presented. Here were two instances in which the "almost perfect fry" had died by hundreds of thousands in a few days, and yet Mr. Wilmot can think of no other cause than "incompetency and neglect." If he did think of one, he has not been sufficiently ingenuous to admit it. Does it not seem a very curious coincidence that, in both these cases, the "incompetency and negligence" occurred just at the time when the embryos had become almost perfect fry?

Does it not seem strange that this incompetence and negligence did not cause any unusual loss when only a small number of ova were in the troughs? Is it not remarkable that the same incompetence and negligence should meet with unusual success all through the period of incubation that is most difficult and critical, viz.: the first months after laying down the ova in the troughs, and fail only when the least care and attention were required, viz.: "when the embryos had become almost perfect fry, and possessed great power of endurance and vitality?" Had Mr. Wilmot not been so intent on ingeniously fitting facts to his hasty assumption, these things would probably have received more attention than he has given them. But the fact is that Mr. Wilmot has given very little attention to this House; since its completion he has paid but three or four flying visits to Miramichi, and these at times when none of the difficulties that have beset the House were observable. Originally the dams of the supply and retaining ponds were wholly inadequate to resist the great freshets which occur on the stream both in spring and fall. The head of water in the tank was quite insufficient to supply the troughs with the requisite flow of water, and though Mr. A. B. Wilmot made a considerable improvement in this respect, still the supply is very much less than that of either the Dee Side or Bedford Houses.

With these remarks on Mr. Wilmot's report, I will now state my present opinion of the cause that has led to the ill-success of this Hatching-House, and my reasons for believing that this cause has already been partially and can be entirely removed. As this opinion has been arrived at after much careful observation and anxious thought, I submit it as worthy of consideration.

I will premise by a short *résumé* of the facts as shown by the records of the Department. Late in the fall of 1873, the House was only partially finished, and many of the ova laid down that fall were lost, from exposure to cold and want of proper conveniences for caring for them. During the summer of 1874, the House was completed, and means provided to keep up a certain temperature. That fall Mr. A. B. Wilmot laid down in the troughs 1,500,000 ova, which continued to progress favourably until the month of April, 1875, just as the young fish were bursting the shell. At that time a sudden and great fatality befel them, so great that only 150,000 young fish were produced. In the fall of 1875, owing to extensive freshets, the dams of the supply and retaining ponds gave way and all the parent fish stored in the latter escaped before they were ripe for spawning. By great exertions Mr. A. B. Wilmot succeeded in getting some 65,000 ova by going far up one of the tributaries of the South-West. After having laid these down in the troughs, Mr. Wilmot was removed to Bedford, and at the request of Mr. Whitehead, I consented to do the best I could to supply his place; Mr. Sheasgreen having the immediate care of the House. This superintendence was really Mr. Wilmot's work which he was paid for not doing. The ova then in the troughs were hatched out with very small loss, and in the spring of 1876, the young fish were successfully planted according to your directions. In the summer of that year the dams were rebuilt (still without any assistance from Mr. Wilmot, on whom the work properly devolved), and in the fall 610,000 ova were laid down, which continued to do exceptionally well until the latter part of March, 1877. Between that time and the 16th of April, a loss occurred, amounting to nearly 50 per cent of the whole number. This loss

occurred during a heavy freshet, which deposited a great quantity of black sediment on the eggs, just at the time when the embryos had almost become perfect fry. Only 318,000 fry were hatched and distributed. Now, in all this time, from 1873 to 1877, Mr. Wilmot paid but three or four flying visits to the House, and had no sufficient opportunity of investigating facts or making careful observations. He never gave me any notice of his visits, consequently I had no opportunity of advising with him, or even of taking his instructions. Neither did he communicate with me by letter. Bearing all these facts in mind, I now crave your close attention to the following:

When the first great loss occurred in 1874-75, Mr. A. B. Wilmot attributed it to the foul water, and its action on the zinc trays. From certain facts stated in his report to you, there were strong grounds in support of his opinion. So firmly convinced was he of the truth of his opinion that, when he found the same character of water at Bedford, he urged your Department to furnish him with earthen trays, and he also applied filters that intercepted the sediment before it reached the ova. He was very successful with these appliances, and, consequently, more firmly convinced that zinc trays were not suitable for the Miramichi House. But, from the above *r  sum  *, you will observe a fact that operates even more strongly against his conclusion. This fact is that, in 1876-77, the loss occurred on both zinc and earthen trays, although less on the latter. You will also observe another fact that operates strongly against his conclusion, that is: when only a small number of eggs were in the troughs, they did well, and no unusual loss occurred. Now, these two facts struck me with great force, and I could not but see that Mr. A. B. Wilmot's theory did not meet these facts. If the peculiar nature of the water was the cause of this loss, why did it not kill all the eggs, why did a portion of the large crops of ova escape, and why did all the small crops escape? These questions caused me much anxious thought. Mr. Samuel Wilmot not having had my opportunities for observation, hastily concluded that neglect was the cause of loss, but I had strong reasons for believing otherwise. In the course of my thinking over all the circumstances, a third fact in the *r  sum  * struck me very forcibly, and that fact is: that the great losses in the large crops of ova occurred just before the young fish were ready to emerge from the shell! Here a new direction was given to my thoughts, and I was led to suppose that at this particular time the sediment did the mischief. This was my belief up to April last, when I accompanied Mr. Samuel Wilmot on his visit to the Bedford House. The first thing that struck me there was the greater body of water flowing out of this tank over the eggs. I called Mr. S. Wilmot's attention to this, and asked him if the small supply of water might not have had something to do with our trouble. He replied that our pipes ought to supply all the water needed. When next I saw our House I was still more forcibly struck with the difference; our streams were weak and the water flowed sluggishly over the eggs. Suddenly, as if by inspiration, it became clear to me, that at the time when our large crops of ova were near bursting the shell and the embryos had become almost perfect fry, the pipes did not supply water enough to give them the air they needed. Previous to this, and before the act of breeding, the embryos did not need so highly aerated water, and consequently the ova would do well until the time came when more air was wanted. Now, a weak sluggish stream flowing over the ova, would give only a limited quantity of air, and that want was not enough to supply the wants of hundreds of thousands of embryos struggling in their shells. The consequence would be that suffocation would commence and continue until enough had died to give the remainder the air they needed to sustain them. This is precisely what the natural process suggests. While the eggs are developing under the ice in the winter, they need but slightly aerated water, but when they are nearly hatched and need more air, in the month of April or May, the ice breaks up, the streams rise, the flow of water is greatly increased and becomes much more highly aerated, and so supplies the wants of the now breathing embryos. This want of sufficient water flowing from the supply tanks into the troughs was, I am now persuaded, the radical trouble with our House, and another consequence of this deficient supply was that the small flow of water

would not carry off the sediment, and hence the great accumulation on the ova which at this particular time would also help to suffocate them.

Had Mr. Samuel Wilmot not been so bent on supporting his hasty conclusion of incompetence and neglect, he would probably have reasoned out this same conclusion. Indeed, I cannot help thinking that he had an inkling of it, and must have had doubts of the correctness of his theory of incompetency and neglect; else why did he this season order the supply dam to be raised over a foot; why did he have the pipes overhauled and made tight, the result of which is that nearly double the quantity of water is now flowing over the eggs, but still not in as full and rapid streams as the Bedford House has, which, in my opinion, are the cause of Mr. A. B. Wilmot's great success in that establishment. He has treated his eggs just as he did in Miramichi, and he considers the water of the latter House just as good as that of the former.

All these facts contained in the *résumé* above given bear out the conclusion at which I have arrived, from my experience of the Miramichi House; and my observation of the Bedford House strengthen it. When we get the quota from Restigouche of 200,000, there will be 710,000 ova in our troughs, which number, although not so large as I could wish for a rigid test, will give me the means of either verifying the correctness of my conclusion, or proving it erroneous. I am, of course, very anxious about the result, and yet I have confidence enough in Mr. Sheasgreen to leave the care of the House in his hands. If the result is a success, I think no doubt can remain as to the cause of the past failures, and no fears need be entertained as to success in future. But yet, in my opinion, it will be necessary to still further increase the flow from the supply dam before it will be safe to lay down a million and a half or two million ova. With a sufficient flow of water, I see no reason why this House, with its great amount of trough room, cannot just as safely hatch 2,000,000, as I feel sanguine it will this winter hatch 10,000.

The interest I feel in the success of this house must be my excuse for the length of this letter; and I hope when Mr. Samuel Wilmot considers all the facts that I have stated, he will agree with me in the opinion I have already expressed in a previous letter, that we have all been looking for a remote and hidden cause of failure, while the real cause has been plainly before our eyes, but has been overlooked. That Mr. A. B. Wilmot, Mr. Sheasgreen and myself should have hitherto overlooked this plain cause of failure, is not strange, but that Mr. Samuel Wilmot, with his large experience has done so, ought to lead him to be more careful in future before blaming others for his own neglect.

Recent advices from Mr. Sheasgreen inform me that the ova are doing well, with small loss; those from Oxford quite as well as the others.

Respectfully submitting my conclusion and the reasons that have led to it, to your consideration,

I have the honour to be, Sir,
Your obedient servant,

W. H. VENNING,
Inspector of Fisheries, N.B.

NEWCASTLE, Ontario, 4th February, 1878.

The Hon. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

SIR.—I beg to acknowledge the receipt of your communication of 29th January, referring to matters in connection with the Miramichi Fish-Breeding Establishment, with an enclosure; also containing an "abstract" from a letter of Mr. Inspector Venning, touching upon certain proceedings at the hatchery, and in its imputing to

me a "want of attention" and "neglect of duty" in the supervision of that institution.

In the Departmental letter I am reminded that it behoves me to keep myself well acquainted with the care of the buildings, &c., until the result of such experience shall be known, and to take every precaution to know the condition of affairs in order that I may judge of the real cause of any further failure, should it occur.

In compliance with the desire expressed in the above paragraph, I will use my best endeavours to carry out the instructions as fully as possible; and it will be my object in this communication to lay before you the true state of things as I found them in relation to the failure in procuring the requisite supply of eggs at the Miramichi Hatchery last autumn, and the precaution that was exercised on my part to prevent that unfortunate occurrence.

With regard to the charge of "neglect and want of attention," as alleged by Mr. Venning against me, I do not desire to enter upon, or importune you with explanations concerning his perversion of the facts, unless required by you. The animus through the whole "extract" gives unmistakable evidence of ill-will and jealousy towards me. This expression of feeling is not confined to this "extract" alone, for it has been frequently shown in that officer's previous correspondence with your Department and with myself.

This envious and quarrelsome disposition on the part of Mr. Venning, has of late become very conspicuous towards me, but as the matter is not of public or official importance, no comment is required. I desire however to express regret that such unpleasantness should exist, as the want of unity of purpose and mutuality of interests between officers must more or less retard the success of any undertaking which you may be desirous of confiding to them.

Your official letter is very explicit that I should take every precaution to know the condition of affairs at Miramichi, &c. I do not think I shall be in error when I state, that in faithfully performing that duty hitherto, and in seconding your strong wishes to have that institution put upon a more satisfactory basis in order to prevent, if possible, a further repetition of the misfortunes that have befallen it, the unpleasant and unwarranted strictures of Mr. Inspector Venning have been passed upon me.

It will be needless for me, in this letter, to touch upon the disasters that have befallen the Miramichi Hatchery previous to last autumn, only to reiterate a still stronger belief in the statements which I made in my report to your Department on the 28th of June last. But it is concerning questions and mishaps which have taken place there since then that I consider necessary for me to refer to now.

In August last, when in Halifax on a general inspection of the several institutions for artificial fish-culture under my supervision, I had an interview with yourself and your Commissioner of Fisheries regarding the best method to be adopted to make the salmon-breeding works on the Miramichi River more successful, if possible, than had been the case in former years. I was then instructed to proceed at once to the place to inspect it, and to make such improvements as I found necessary, and also report to you the best means for putting the Institution on a proper basis for future operations.

After visiting the premises, and having ordered some improvement, whichs were only trivial in their nature, as I found almost everything in connection with the establishment in good working order, I reported to you my views in a letter from Gaspé which you acknowledged by instructing me to carry out the suggestion I had made; namely, that in order to prevent further conflicting interests in the supervision of the works, I should be put in the sole control and management of them, subject, however, at all times, to your Departmental instructions.

In taking upon myself this extra responsibility of the direct charge of the Miramichi Breeding-House, it must appear quiet obvious that I was putting upon myself a much greater amount of labour and anxiety of mind in the supervision of a work upwards of a thousand miles distant from my residence, than it was desirable for me to perform; more particularly so was it the case when the multitudinous duties in

connection with the Sandwich and Newcastle Establishments in Ontario demanded my personal oversight and practical application, mentally and mechanically.

The objects that prompted me to take upon myself this additional responsibility were as follows: the great desire to redeem, if possible, the unpopularity into which the institution had run itself; and that Mr. Venning (with whom I had previously had a conversation on the subject) should be relieved from a work in which he absolutely refused to take any further responsibility; and to stay the very bitter and unpleasant newspaper controversy then going on, and the frequent complaints being made to your Department, imputing to Mr. Venning's mismanagement of the institution. In addition to the above, I felt assured that in having the several employes in connection with the establishment under my immediate control, I could so instruct them, and also receive from them such frequent and constant information in relation to all matters, as would enable me to know the exact position of affairs, and to carry on the whole work more satisfactorily.

With this view I gave to Mr. Isaac Sheasgreen, the officer in charge of the buildings, the most particular instructions with regard to his duty, and specially he was ordered to write weekly, and oftener, if found necessary, as to what was transpiring about the premises, and further, should anything of an extraordinary nature take place, he was to give me immediate notice of it by telegram. I also wrote Mr. Hogan, the local Fishery Officer at Newcastle, telling him that the breeding establishment had been put under my control, and that he was to make every preparation for capturing the requisite supply of parent salmon at the proper time. I furthermore notified Mr. Venning that the sole management of the Hatchery had been given to me, asking from him at the same time, his hearty co-operation in all matters where I might require his advice and assistance.

It will be unnecessary to give you in detail the correspondence which took place between Mr. Sheasgreen and myself up to the 24th September, only mentioning that it consisted of circulars and letters of instruction for his guidance. But from that time I will give you extracts from his letters, the originals of which will be found appended hereto marked A.

On Sept. 24, Sheasgreen writes "Establishment in good running order; have now 110 parent fish in the pond, expect another lot down to-morrow; working hard to make all things go right."

Oct. 2nd. He says: "Fish are very plenty; have taken over 200, but have lost some; fish don't seem to do well here this fall; fishermen say they don't look well when taken. Weather very warm, loss amongst females is greatest; will commence spawning about 20th of the month."

Oct. 6th. He says: "We have good luck in getting fish; we have now 277 in the pond, more than half are male fish; expect men down on Monday with more; there is a good run in the river."

Oct. 15th. "Yours of 1st Oct. received; will follow instructions given therein. Freshet very high, but no damage done. I think a few fish may have got out; all danger now over for the season. Fishermen will be down to-day with 100 more salmon; we have now a sufficient number to fill the House."

Oct. 22nd. He writes: "I am going to commence spawning on the 24th; I have a fair share of fish in the reception-house and some in the pond. Fish taken in first part of the season have not done very well; had to let some of them go. I am bound to fill the fish-house this fall if possible. Would like to see you after eggs are laid down, if you would come. Will write again in a few days and let you know how I get along."

From the above date, Sheasgreen's correspondence ceased altogether, until after my visit to the establishment in the beginning of November.

From the foregoing statements, which were communicated to me by the officer in charge, as well as by a confidential friend, I felt safe in my conclusions that everything was progressing most satisfactorily at the Miramichi salmon nursery. These ideas were, however, all at once dispelled by the receipt of a telegram from your Commissioner, Mr. Whitehead, bearing date the 31st October, and received by me the

following day, stating that "Messrs. Venning and Hogan reported salmon sickened and died,—fear water has something to do with it. Something must be done to ascertain cause of repeated failures—look to this."

On the day following I received a letter from my confidential friend at Newcastle, in which it was stated that he had just seen Sheasgreen, who had informed him that he had spawned all the fish, 78 in number, obtaining from them 308,000 ova, and that he, Sheasgreen, had been up river two or three days, endeavouring to catch more fish, but without success; and that Messrs. Sheasgreen, Hogan and Venning were going to Bathurst to seek more eggs there.

Upon receipt of the above (to me) very extraordinary intelligence, I concluded to start for Miramichi at once. Sunday intervening, I started from home the following day, and reached the establishment as quickly as it was possible to get there, and found, as had been stated to me, that only some 300,000 eggs had been laid down in the hatching-troughs, instead of upwards of a million that I had confidently anticipated would have been secured, from the numbers of salmon that were reported to me by Mr. Sheasgreen as having been placed in the pond.

Upon a close examination of everything in connection with the establishment, I found the ponds, buildings, apparatus of every description, and the ova that had been laid down, all in the most perfect, cleanly and satisfactory condition that could be desired. But I could discover no real or apparent cause, just then, why so great a mortality should have befallen the parent salmon, that were reported to have sickened and died previous to their manipulation.

In the investigation that I made with Messrs. Sheasgreen and Hogan, in reference to this unusual and extraordinary loss of parent fish, both of these officers gave it as their opinion that it had resulted from some peculiar disease which had attacked not only the salmon in the ponds, but in the open river as well; that they presented a weakly and sickly appearance when first captured, their bodies being covered in many instances with sores, which when the surface was removed, presented the appearance of proud flesh formed in wounds, and that a growth like fungus rapidly spread over the bodies of the fish, quickly causing them to die. This fungoid growth upon the bodies of fish is of no uncommon occurrence where abrasions of the skin are made either in the netting of them, or in rough, coarse handling. Afterwards a parasitic growth sets in, which in close confined limits, or in small supplies of fresh water, spreads over the body of the fish very rapidly, causing extreme weakness, and finally death. This cutaneous affection is seldom if ever noticeable amongst fish when enjoying freedom in the open waters of their native streams. In my experience, now covering many years, in the capturing and handling of salmon and other fish, I have never detected this disease amongst them in their native open waters; but I have very frequently noticed it upon the fish when injured as above mentioned, and when kept in too close confinement, or in too small a supply of water. When this insidious fungus growth sets in upon the fish, it will be found almost a matter of despair even to attempt to save them.

Another malady is found to prevail amongst fish, particularly when they are far advanced in pregnancy, in the caking and solidification of the ovaries, by the stoppage of the fluids through the small membranes by which the eggs are connected together and fed previous to their maturity. From the observations which I have made as to the cause of this disease, I am of opinion that it is brought about by the close confinement of too many fish within small circumscribed limits, in which they are unable to roam about and partake of sufficient freedom and exercise of body, thus preventing the healthy circulation of the natural functions so requisite at his critical period, or spawning season of the fish.

In connection with the Miramichi salmon-breeding establishment a very large pond was formed, comprising a large surface area, with a depth of water varying from two to ten feet, and fed by a constant flowing stream, quite sufficient for all the requirements of the pond. It is also additionally purified from time to time by heavy spring tides, which back up into it from the Miramichi River, through the sluice-gates. The object of forming this large body of pure living water was that it should

be a receptacle for keeping safely such numbers of parent salmon as might be required for the uses of the breeding-house, until they became perfectly mature and ripe for spawning. This reservoir, or mill-pond, has area and capacity sufficient for fully one thousand salmon.

To supply this pond with the requisite stock of salmon, a means has been devised by which they are captured in small meshed nets in the main river, at the head of the tide-way, about twelve miles from the pond. They are taken from the traps of the set-net by means of a small hand-net, and quickly put into a large scow, which is completely covered in, and is also sub-divided into numerous small compartments, made with round wooden stakes set about two inches apart; the two ends of the scow being open, and it being fastened in mid-river, the water flows through the whole length of the scow and amongst the fish, almost as freely as would be the case in the open river. This vessel is then towed or poled down river to the reception pond, and there emptied of its contents by dipping out the salmon and putting them in the large mill-pond or reservoir; here they find themselves at freedom, and can swim about at pleasure, partaking at will of the deep or shallow portions of the pond, as well as shelter and shade which is afforded them by the high banks and trees which almost encircle it. During their sojourn in the pond, let it be either for a long or short period, they neither take nor require food of any kind for their sustenance. It is now a well-known fact in ichthyology, that salmon eat nothing on their migration up rivers to their spawning grounds after leaving the tidal or salt waters of the sea.

At the head of this pond, for the distance of about thirty yards until the small reception-house is reached, the stream runs quite rapidly over a gravelly bottom, where the salmon must resort to for laying their eggs at the time when their ova has become perfectly ripe for spawning. And it is farther arranged that by giving an extra supply of water from the dam above, the fish most eager to rid themselves of their eggs, will follow up this increased flow of water into the reception house, when they become entrapped and are caught and manipulated. By this method of operating, there need not necessarily be a large number of ripe fish in the small reception-house at one time, the spent ones being transferred to the main river almost immediately after the work of artificial spawning has been performed; thus giving plenty of room for the incoming fish.

The reception-house just referred to is a small building expressly built for the purposes above related. It was never intended to accommodate but a small number at one time, and only then for short periods; its size is about thirty feet long by twelve wide; roofed in, floored at the bottom, and so arranged as to be sub-divided into compartments or pens, and with places for fixing weirs for entrapping the fish as they enter the building.

The superficial area for the accommodation of salmon inside the house cannot exceed 300 feet. The allowance of space that would be taken up by an ordinary sized fish would be 3 feet long, by 6 inches wide, or $1\frac{1}{2}$ superficial feet; the building would in this case hold 200 salmon when closely packed together. To allow anything like freedom of movement, this number should be reduced one half, thus giving the extreme limit at 100; and even with this number the period of their confinement should be of short duration.

I obtained from Mr. Overseer Hogan, who had the management in capturing and delivering the salmon, the following statement as to time and place of delivery. The particulars were taken from his diary as follows:—

Sept. 15th.—“Twenty salmon put in pond, (a few sick).”

Sept. 17th.—“Seventy salmon put in small reception house; floated them up through the pond to the house (two or three sickly).”

Sept. 22nd.—“Thirty salmon put in pond (one or two sickly).”

Sept. 26th.—“Fifty salmon put in pond (nothing particular wrong).”

Sept. 29th.—“Seventy salmon put in pond (nothing particular wrong).”

Oct. 5th.—“Forty-nine salmon put in reception house with boat (in good condition).”

Oct. 16th.—“Eighty-five salmon put in reception house (one hundred and ten were brought down, the balance were turned into river, being sickly).”

“Total—Three hundred and seventy-four. Of this number there were put into the reception-house two hundred and four; the balance, one hundred and seventy, were put into the large pond.”

Mr. Sheasgreen's statement, taken from his letters, (appended), with regard to the disposition of fish, is as follows:—

Sept. 24th.—“One hundred and ten salmon in pond.”

Oct. 2nd.—“Two hundred salmon; (lost some).”

Oct. 6th.—“Two hundred and seventy-seven salmon in pond; (more than half males).”

Oct. 22nd.—Reports, “fair share of fish in reception house; some in pond have not come up.”

If we add the eighty-five, the last lot delivered by Hogan, to 277, the number reported by Sheasgreen, 362 will be the total, making a difference of twelve between the tallies.

It will be noticed from the above statements in Mr. Sheasgreen's letters, that no mention of any salmon being put into the reception-house is made until the 22nd October, when he reports (without any numbers) that a “fair share of fish were in the reception-house; some in pond not come up.”

During my visit at the Miramichi establishment on 7th November, Mr. Sheasgreen gave me the following statement, which, he says, is a true and correct one, of the disposition of the salmon received by him, namely:—

Females spawned.....	76
Females died.....	45
Males turned out.....	210
Sickly fish run over dam.....	20
<hr/>	
Sheasgreen's total.....	351
Difference not accounted for from delivery made by Hogan....	23
<hr/>	
Hogan's total.....	374

The above statement appears to me so extraordinary upon its face, that I am compelled, for the present, to discredit it. But to take the figures as they are here represented, in order to ascertain the amount of mortality, the alleged number of males, 210, and of females, 76; in all 286 living fish, are said to have been turned into the river, out of the gross number of 374. This would leave a balance of 88 for deaths, inclusive of the 20 sickly ones, and the discrepancy between the counts of 23. Now, if these two latter numbers are deducted from the 88, there remains but the 45 dead females as the total loss out of the gross number originally delivered by Hogan, of 374.

Assuming, then, that only 45 females died, it is of importance to ascertain the cause of their death, and why it was that many others of the salmon (as it was stated to me) “had become hard, and no spawn could be got from them.”

Mr. Sheasgreen informed me that he “put in” and “run in” 96 salmon from the pond to the reception house. This number, in addition to the 204 put in by Mr. Hogan, would form a total of 300 fish that were imprisoned within the small limits of the reception-house, when its capacity was barely sufficient to safely keep over 100 at a time.

It also appears that the number of ova taken from the 76 females was only 308,000, making an average of 4,052 eggs from each salmon spawned.

In making a *résumé* of the above statements and matters, and laying before you the conclusions I have come to as to the cause why the salmon “sickened and died,” I feel that I shall again come in conflict with the opinions of Messrs. Venning and Sheasgreen. But whilst I regret that contradictory views should be held by us in

reference to these repeated misfortunes at the Miramichi Fish-Breeding House, I, nevertheless, feel it my duty to express frankly my convictions, borne out, as I trust they will be, by the facts as related, with the application of common sense and reasoning.

Greater detail has been entered into with the whole subject in this letter than might otherwise be considered desirable; but it was essentially necessary to show the nature and the cause of some of the diseases that salmon are liable to, when taken for the uses of artificial propagation, and also of the importance to show clearly that the necessary means were provided and were available for the prevention of sickness and disease in the parent fish, which means, if they had been judiciously used, might, and no doubt would, have prevented the misfortune which took place at the Miramichi establishment last autumn.

It has been shown that 374 parent salmon were captured and conveyed to the establishment during the months of September and October last; that 204 of this number were conveyed directly from the main river into the small reception-house, and that 96 more were also put into it from the pond during the same period, making a total of 300 salmon confined within the narrow limits of 30 by 12 feet. This most serious and fatal want of judgment produced the effect of sickness, disease, fungoid growth and caking or hardening of the ovaries of the fish, and consequent death of the numbers reported; and I fear that many others also met a similar fate; and this view is sustained by Mr. Venning's statement made to your Commissioner when at Chatham, that the eggs were hardened in about 300 salmon that died. Yet, in utter contradiction of this, Mr. Sheasgreen says that he turned out from the Reception House and from the pond 300 living fish, from the total number of 351 received by him from Overseer Hogan.

Small roughly-made crates or open boxes were used for conveying the salmon down the river, instead of the large scow fitted up purposely for the work. It is stated that the small boxes were better for the work than the scow, on account of the greater freedom for the passage of the water through them, and being more easily handled. This to a certain extent may be the case, but the counteracting influences were two-fold worse; as in the boxes, with their rough construction, jagged edges and angles, the fish would be almost certain to injure themselves, and more particularly would this be the case from the increased liability to nervousness and fear to which they would be subjected in seeing every movement of the men engaged in towing them down river. In the scow, which was thoroughly decked over, the danger from fright and consequent liability to come in contact with the sides of the small compartments would be almost overcome.

In my judgment, the loss of salmon at Miramichi last fall was brought about by the causes above mentioned, namely: Want of sufficient forethought and care in transporting them to the works, and want of judgment in confining such a large number of parent fish in the small limits of the Reception House for so long a time previous to spawning, when it was quite unnecessary, as immediately alongside was the large reservoir or mill pond, erected for the purpose of retaining the fish, and sufficiently large for the safety and accommodation of at least eight hundred salmon.

The discrepancy in the numbers of ova laid down in comparison with former years, also demands consideration. If the report of Mr. Sheasgreen be a reliable one, he says that 76 females were spawned by him; 210 males were liberated; 45 fish died, and the remainder were sickly fish and ran over the dam. In 1874, some 360 salmon were put into the pond; half of these, as nearly as can be stated, were females; say 180. These gave nearly one and a-half millions of eggs, making an average from each female of between 7,000 and 8,000 ova. In the year 1877, no definite data is at hand to give the average of eggs. But in referring to other establishments for an average of eggs taken from each female during the fall of 1877, the numbers are:—

Gaspé—average from each female	12,500
Restigouche do	13,800
Bedford do	9,000
Miramichi do 1874	7,500
do do 1876	10,000
do do 1877	4,000

This extraordinary falling off in the average at the Miramichi, last fall is, to me, quite unaccountable, unless an error in the count of 76 females is assumed as being too great; and if this was the case, then a worse dilemma presents itself in the conclusion that the mortality amongst the salmon was greater than reported.

Again, the unusual preponderancy of males over females in the statement is such as to cause doubts as to its accuracy. 206 living males stand against only 76 living females, but 45 females were reported as having died; making altogether 121 females, whilst the gross number of males was 210 with no losses mentioned whatever. In 1876, there were manipulated at the Miramichi 65 females and 76 males; total 141. This great disproportion in the sexes particularly when captured in ascending the main river, as these were, is quite unprecedented; but when salmon are taken on their spawning grounds, a preponderance will sometimes be noticeable; yet, as a general rule with the adult fish, the sexes are about equal in numbers. It is also worthy of note here with regard to mortality among the sexes, taking Prof. Buckland as an authority, added to my own observations, it is found that greater emaciation and a larger percentage of death takes place with males than with the females, during the spawning season of the salmon.

In connection with this discrepancy in numbers of ova, and the unusual preponderance of males over females, I desire to quote from Mr. Venning's letter of November 6th, 1876, which relates to the operations of catching salmon and gathering eggs for the Miramichi Hatchery for that year.

He says: "On the first of September, the nets were set, and in October, 141 salmon were caught in the river and placed in the pond, without the loss of a single fish. These fish in the pond were conveyed to the Reception House, and on the 30th October were ready for manipulation. There were in the Reception House 141 salmon, sixty-five females and seventy-six males, all in good condition. The ova and milt were well developed and ready for depositing. The females yielded an average of 10,000 ova; 610,000 impregnated ova were laid down without any appreciable loss, not one dead egg in a thousand. In all his experience he had never seen so small a loss in so large a number of manipulated fish. Everything promised a most successful issue, and the supply of water was ample."

From the above extracts it would appear that everything in connection with the Miramichi Hatchery, during the season of 1876, was of the most satisfactory nature, and quite unprecedented, as not one single fish was lost; ten thousand eggs were obtained, and there was not one dead egg in a thousand. From this statement it will be observed that a very great difference existed in the proportion of males and females, as between the seasons of 1876 and 1877. In the former year, the numbers of the sexes were not of an unusually disproportionate character, whilst in the latter they are beyond all precedent.

With regard to the quantity of ova taken from each female salmon in 1876, as compared with the season of 1877, the difference is so unaccountably wide, as to leave no doubts in the minds of any person conversant with the subject that either miscalculation or misrepresentation has been resorted to. The calculation of the numbers of ova procurable from a female salmon is now pretty well established at 500 for every pound weight of her flesh; therefore the Miramichi salmon of 1876, giving 10,000 eggs each, would weigh twenty pounds, whilst, in point of fact, this will be found to be fully double their usual average size. But, with Mr. Sheasgreen's statement of 4,000 eggs each in 1877, the weight of the salmon would be reduced to eight pounds. Here, again, the variance in size of the salmon, from twenty to eight pounds, in two

consecutive years, is such as to give grave doubts concerning the accuracy of the statements reported to your Department in relation to the Miramichi Hatchery.

If the several mishaps which have occurred at the Miramichi establishment had taken place at the same stage of the incubation of the ova, or at the same season of the year, or from the same causes, then the statements of those persons who endeavour to establish certain theories of their own for these misfortunes, might be held as somewhat tenable. With one, for a serious loss which took place just previous to the hatching out of the eggs, a chemical effect brought about by the use of zinc trays coated with paraffine varnish was assigned as the cause; nevertheless, a large number of fry were actually hatched out on the same trays during that winter; and with the same apparatus, and in the same institution, the season following, ninety per cent of the whole of the ova deposited on the hatching-trays were reported to have produced living fish.

Another severe loss also occurred there at an earlier stage of the hatching of the eggs; this was attributed to the sudden deposit of sedimentary matter upon the ova during the existence of a heavy freshet in the stream in the month of March; this substance, it was alleged, quickly caused the eggs to die; yet upwards of 300,000 fry were actually hatched out from the very same lot of ova, laid down in the same troughs that season. This disaster has been attempted to be covered up in the opinion of interested persons, by stating that the stream upon which the establishment is built, is not, from the nature of the water with the sedimentary deposits in it, naturally adapted for the propagation of salmon. This erroneous statement is set aside, from the fact that hundreds of thousands of fry have been reared in this water, and that previous to the building of the establishment there, the stream for a mile or more up, was literally swarming with salmon fry, parrs and smolts; many of these were caught with hook and line by myself and other persons, previous to, and since the erection of the works.

I beg to draw your attention here to an extract from your Inspector's letter to your Department of 31st December last, in which he speaks of the non-injurious effects of this sediment upon the eggs. He says: "The freshet in the stream which supplies the Hatchery, continued several weeks after the eggs were laid down, and caused the water to become very impure. About the 25th November, Mr. Sheasgreen informed me that the quantity of sediment deposited on the ova was so great as to threaten their destruction. I immediately asked and obtained your permission to place filters in connection with the main tank to remove the source of danger."

"On the 27th, I went to Newcastle for this purpose, and, on reaching the Hatchery House, I found the ova so covered with a heavy deposit of black sediment, that they were scarcely visible on the trays, but, I also found, to my great gratification, that, so far, the loss had been almost inappreciable, not more than 1,500 dead eggs having been removed since the ova was laid down. On carefully washing several of the trays, the eggs presented a bright and healthy appearance, the embryo being discernable in all. During the first week in December the whole of the ova was carefully washed, with the most gratifying result, all coming out of the sediment bright and healthy, with the loss of only 700 in this critical operation. I have strong hopes that no further danger from sediment need be apprehended. Before the spring freshets set in the ova will be so far advanced that I do not fear any serious danger from them."

But when it is clearly established that, notwithstanding the alleged unfitness of the site, the impurity of the water, unsafeness of hatching trays and injurious sedimentary matter in the stream, that large numbers of young salmon have been actually reared there, then another idea is put forth to account for the numerous misfortunes, namely: that there has not been a sufficient supply of this peculiar water let into the building for the proper health and aeration of the eggs; and further it is advanced that in order to give a crucial test to the establishment during the coming season, salmon eggs from the Provinces of Nova Scotia and New Brunswick must be procured and laid down in the troughs of the Miramichi breeding house. Surely, if the evil effects from the trays and the water and the sediment

hitherto (said to have been) experienced at this institution have proved so disastrous to the native eggs, greater misfortunes must necessarily be apprehended from the introduction of foreign ones.

There are other anomalies in connection with this Hatchery, concerning the gathering of the ova, which require to be mentioned. During one season, when only a small supply of eggs was procured (although a goodly number of parent fish had been secured) the cause assigned was that the salmon had escaped by the breakage of the dam. During another (the past) season, just when it was reported that a sufficient stock of parent fish was secured to supply the establishment with a million and a half of eggs, all at once it was found that only 300,000 of this quantity is procured and the great diminution is accounted for by a statement that the salmon "sickened and died." In making a contrast of this year with that of 1874, it is found that, with about the same number of parent salmon in the pond, and with an officer (a perfect stranger to the place) being despatched from Ontario to perform the work of spawning, 1,500,000 ova were successfully impregnated and put upon the trays.

After the most careful and unbiased consideration of all the circumstances referred to in this letter, I cannot do otherwise than repeat the conclusions which I arrived at in my report to your Department of 28th June last concerning the conduct of the officer in charge of the Miramichi Fish-Breeding Establishment: I then reported incompetency, neglect and want of veracity. I must now add, an utter want of ability and judgment for the supervision of so important a work as that of artificial fish-culture. Disobedience is also chargeable against him, for had he obeyed the positive instructions for putting the parent salmon in the large pond, the great loss in the death of the fish might have been averted.

In giving my estimate of the abilities of Mr. Sheasgreen for the position he holds, I regret very much that it is in direct opposition to the opinion given by your Inspector of Fisheries for New Brunswick, who in his correspondence with your Department of the 1st December last, writes in the most laudatory manner of the fitness of Mr. Sheasgreen, and of his honesty of purpose for managing the establishment on the Miramichi River. Nothing would be more gratifying to me than to be able to endorse those sentiments were it in my power to do so fairly and honestly, for the interest of that institution and of your Department. In the one case, facts too clearly demonstrate incompetency, coupled with disastrous losses; in the other, mere vague assertions are made to show competency and sophistry to rebut irrefutable facts.

It will, no doubt, be asked, and quite properly too, why it was that under my control of the institution, success did not attend the operations there last season? My reply is that, when I sought the management of the Miramichi Breeding-House, I did it with but a single eye for its success. I was then, and I am still of the belief that, with the careful help of a painstaking and honest care-taker, one having had some previous knowledge in the handling and spawning of fish, success could be achieved. In my effort to accomplish that end, the most clear and positive instructions, both of a verbal and written nature, were given to the then only available officer to be had to carry them out. (This will be seen by copies of correspondence appended marked B.)

Everything was done by me that could be done humanly (without actual presence) to make success certain. I could not be ubiquitous. From correspondence frequently obtained from the scene of action everything appeared to be progressing satisfactorily. Yet, from the want of judgment, and the holding back of a most important fact in relation to the impounding of the parent fish by the officer in charge, another serious misfortune occurred, entailing further discredit upon the establishment and militating most seriously against a work in that section of the Dominion which it has been my greatest ambition to advance, and also retarding the progress

of an industry which your Department has taken such evident pains to foster and encourage.

I have the honour to be,
Your obedient servant,

SAMUEL WILMOT,
Supt. F. C.

P.S.—Herewith will be found a rough sketch of the grounds and buildings at the Miramichi, also a plan showing the large reception pond for safe keeping of parent salmon.

S. W.

APPENDIX A.

NORTH ESK,
September 24th, 1877.

SAMUEL WILMOT, Esq.,

SIR,—Your letter received to-day. Have the establishment in good running order. Have now 110 parent fish in the pond, and expect to have another lot down to-morrow. I am working hard to make things go all right.

I am, Sir,
Yours very respectfully

ISAAC SHEASGREEN.

NORTH ESK,
October 2nd, 1877.

SAMUEL WILMOT, Esq.,

SIR,—The fish are very plenty at present. We have taken over 200, but have lost some out of that number. The fish don't seem to do very well here this fall. We handle them with great care, but still lose some; the fishermen say some of them do not look well when taken. Weather very warm here all this fall; the fishermen think that has something to do in regard to them not doing as well as they done other falls. It's female fish that we lose most of.

I will commence to take eggs about the 20th of the month.

I am, Sir,
Yours very respectfully,

ISAAC SHEASGREEN.

NORTH ESK,
October 6th, 1877.

SAMUEL WILMOT, Esq.,

SIR,—Yours of 1st October just received. We have had very good luck in getting fish. We have now in the pond 277,* but more than half of those are male fish. I expect the men down on Monday with more. There is a good run in the river at present. I saw Mr. Hogan to-day, he said he telegraphed you to know if he would take any more fish. They have not commenced to work up stream yet. Will write soon again.

I am, Sir,
Yours very respectfully,

ISAAC SHEASGREEN.

* NOTE.—Only 170 were put into pond by Hogan's diary.

(*Telegram from Newcastle, N. B., Oct. 5th, 1877, to S. Wilmot.*)

289 salmon now in house pond. How many should I get? Answer.

JOHN HOGAN.

(Answer.)

Secure well on to four hundred.

S. WILMOT.

NORTH ESK, October 15th, 1877.

SAMUEL WILMOT, Esq.,
Newcastle, Ontario.

SIR,—Your letter of the 1st inst., came duly to hand and contents noted. I will follow the instructions given therein. The freshet has been very high but done no damage, or at least nothing to speak of. The water was running over the lower dam and I had to run a net along the top in order to prevent the fish from going over. I think some have got out. I had to remain at the racks all night in order to keep them clear of leaves, otherwise there would have been a clean sweep; this being the first rise of water this season brought a large amount of leaves and other rubbish. All danger is now past for this season, and I hope we will not have such a sudden rise of water again. The fishermen will be down to-day with one hundred more fish, this will conclude this season's fishing; I think we now have a sufficient number to fill the house.

I remain,
Yours truly,

ISAAC SHEASGREEN.

NORTH ESK, October 22nd, 1877.

SAMUEL WILMOT, Esq.

SIR,—I am going to commence to take spawn on the 24th. I have a fair share of fish in the Reception-House and some in the pond that have not come up yet. The fish taken in the first part of the season has not done very well; had to let some

of them out. I am bound to fill the house, if possible, this fall. Would like to see you after eggs are laid down if you could come. Will write in a few days again and let you know how I get along.

I am, Sir,
Yours very respectfully,

I. SHEASGREEN.

NEWCASTLE, Ont., Sept., 5th, 1877.

Mr. JOHN HOGAN,
Fishery Overseer,
Newcastle, N.B.

SIR,—After leaving you and Mr. Venning at Newcastle, I received instructions from the Minister that the Miramichi Fish-Breeding Establishment had been put wholly under my charge and supervision. When on my way home, at Gaspé, and at Quebec, I telegraphed you to make all necessary preparations for taking a supply of parent fish. On the 1st Sept., whilst at Ottawa, I received a telegram from you, stating that you "had no instructions before, but would then go on at once." With this view then I shall rely upon you using every exertion to procure a large supply of fish. I telegraphed Mr. Venning to forward you the net he spoke of, which was intended for taking shad, and which should be well adapted for netting salmon at the Bridge above, or other portions of the river. I have also caused a letter to be sent to the Minister asking for authority to use Henderson's net should you require it. With these appliances for catching salmon and with the net you have on hand, you should experience no difficulty in securing all the fish we may want this season. I have instructed Mr. Sheasgreen to join you and assist you in taking the fish, and in carrying them safely to the pond at the breeding-house, so that between you both I shall rely upon the necessary quantity of salmon being caught and safely conveyed there. Such assistance as may be required to secure this end you are authorized to get, but there must be no failure in getting the fish; useless expenditure however must be avoided.

Should you find it necessary to get any further supply of nets or apparatus for catching salmon, telegraph or write me immediately upon receipt of this letter. Please keep me regularly acquainted with your doings and the number of salmon you have secured, and let me know your prospects for getting all that may be required.

I am,
Yours, very truly,

SAMUEL WILMOT,
Superintendent of Fish Culture.

NEWCASTLE, Ont., September 7th, 1877,

MR. ISAAC SHEASGREEN,
Fishery Officer,
Newcastle, N. B.

SIR,—I telegraphed you some time ago from Gaspé to go on with the improvements I ordered when at the Miramichi; this I presume you have done. I wish you to understand the great necessity of having the arrangements safely carried out for the winter's operations. Get everything in such a shape as will prevent the possibility of a stoppage of the water in the pipes during the hatching of the eggs. The painting

of the trays and boxes will no doubt have been done by this time, as well as the floor; if not, do not delay one moment in having it done. Get your boxes and trays well dried and then turn on the water and let it run through the boxes and over the trays until you lay down your eggs. I have written Mr. Hogan to use his best exertions to get a sufficient supply of salmon to fill the house with the eggs, and I have told him that you will render all aid in your power in helping him to get the salmon and in bringing them down to the pond. I want you to have no jealousy with him, or any one else, in relation to the work at Miramichi. Go at the business with zeal, and with a desire to retrieve the establishment from the bad name it has now got. Attend to no instructions from any one except myself, but do all you can to make matters a success this season, and you will find it greatly to your interests. Be civil to everyone, but allow no liberties inside or outside of the premises. Write me immediately upon the receipt of this letter how everything is now getting on; and also the prospects of getting your supply of salmon. Do your best to act harmoniously with Mr. Hogan in getting salmon, and write every two or three days what you are doing and how things are progressing. Should anything special turn up, telegraph me immediately.

I am,

Yours, &c., &c.,

SAMUEL WILMOT,
Superintendent of Fish Culture.

NEWCASTLE, Ont., September 19th, 1877.

Mr. ISAAC SHEASGREEN,
Fishery Officer,
Newcastle, N.B.

SIR,—I am in receipt of your letter of the 15th instant, and am glad to hear that the orders given you have been completed, and that you have got the House in good order for the coming season. The pipes you say are all right; this will be found a great improvement, as you can find out at once if anything goes wrong with the water. Did you fix the dam at the head, and did you put the grating on the entrance to the pipes so that no large matter can possibly enter the holes? If not, have it done at once.

You mention having taken some fish, but that some died, and that others were let go on account of fungus growing upon them; you say hot weather and want of motion in the scow caused this. I should think this loss could not occur if the fish were not kept too long in the scow. Mr. Hogan informs me of the loss of fish, but says that small boxes had been made, which he thinks will do better; I hope they will, but the greatest secret in preventing fungus from growing upon the fish is to handle them carefully. If they are roughly handled in taking them out of the traps or net, and when putting them into the scow, it is quite impossible to save them—they should be dipped out with a very fine meshed net, say not more than one inch mesh, or else with a plain cotton bag on a hoop; it is the noks of the meshes that scrape the scales off. Avoid everything that will scratch the fish or bruise them.

I think you had better let the water in your troughs and put your trays in them so that they will get perfectly clean from all effects of varnish, &c.

Don't fail to let me know every few days, what you are doing, both in the numbers of parent fish you have caught, and if anything is required to make a perfect success at your establishment. Everything must be done to make it a perfect success this year. You and Hogan must work harmoniously together in the taking and carrying of the salmon to the ponds.

Expecting to hear regularly from you,

I am,

Yours, &c., &c.

SAMUEL WILMOT.

NEWCASTLE, Ont., October 1st, 1877.

MR. ISAAC SHEASGREEN,
Fishery Officer,
Newcastle, N.B.

SIR.—Yours of the 24th September just received, and I notice you have 101 parent fish on hand. This is very well, but do your utmost to get 150 or 200 females before season closes. Write or telegraph me often, how you are succeeding in the catching of the fish; also, let me know immediately when the first of them are ready to spawn; do this by telegraph as I shall be anxious to get the news as quickly as possible, as I may run down to see you then, if in my power. I am glad that you and Hogan are doing so well. Don't send trays or anything else away from the works without my positive orders. Use your best endeavour to make a successful business this fall and winter.

I am,
Yours, &c.,

SAMUEL WILMOT,
Supt. Fish Culture.

MR. JOHN HOGAN,
Fishery Officer,
Newcastle, N.B.

SIR.—I am pleased to hear of your success in catching 289 salmon, as given to me in your telegram of yesterday. I think you had better get about 350 salmon, say one-half of these would be females, making 175; these, at say 6,000 eggs each would make one million of eggs and upwards, which would pretty well fill up the establishment. I am told by Sheasgreen that a few salmon have died from the effects of the very hot weather you have had. Of course some few will get injured and die, but with extreme care you should not lose many. Be sure and take all the care you possibly can. I expect the Minister will visit you this fall; and as there has been so much said against the establishment and the Miramichi River generally, I would like that every possible success should attend your work and mine at the Breeding-House. I have instructed Sheasgreen to do everything in his power to carry this out, and I feel assured, with your assistance and with Sheasgreen's close attention, I can make the Breeding-House a success this season; but I shall rely upon your good support in all matters; and you must act in concert with Sheasgreen, because a house divided against itself cannot stand. I am sorry that such a very strong feeling is operating against your old friend, Venning; he will, however, be relieved from any fault-finding this season concerning the Breeding-House, as it has been placed wholly under my control, and I look to you and Sheasgreen to assist me in making it a success. Write me often.

I am,
Yours very truly,

SAMUEL WILMOT,
Supt. F. C.

P.S.—Since writing the within, I have spoken to Parker, who was with you the year so many eggs were laid down, and he says there were that year nearly 400 salmon taken, and that he laid down about one and a half million of ova. If it is convenient, then, you might catch between 350 and 400 salmon; this will give us a good supply. I will write Sheasgreen to take the utmost care of them at the ponds.

Yours, &c.,
S. W.

APPENDIX B.

(Circular.)

NEWCASTLE, Ont., 1st October, 1877.

SIR,—The following instructions are forwarded to you for your guidance in the spawning of salmon and in the impregnation of the eggs, and also in the mode of laying down the ova in the breeding troughs.

1st. No eggs or milt should be taken from the parent fish until they are found perfectly ripe and mature for operating upon. To ascertain this, take a female fish from the water by the tail, care being taken not to pinch the fish too tightly or rub off the scales or skin; hold her up perpendicularly; wrap a piece of factory cotton round the body (about one yard of cotton will answer), then hold her over a large tin pan, so that her vent will be inside of the pan; if she is fit for operating upon and the eggs quite ripe, they will flow easily from her body; in this case you can assist the flow of eggs by gently pressing the belly downwards, until all of the ova are taken from the fish. Use no force whatever, for if the eggs do not come freely they are not ripe and will not receive impregnation. If the eggs do not come freely put the fish back in the water again; before doing so, tie a small white cord or strip of cotton around her tail; by this means you will easily know her again from the rest of the fish in the pen or tank, and you will be enabled to catch her more readily after a day or two, when in all probability she will have become ripe for spawning.

It is wrong to take part of the eggs from a fish one day and the balance upon other days. Let all of the ova in the body become perfectly ripe before you spawn the fish.

2nd. If your fish is found to be perfectly ripe, let the eggs fall gently into a shallow tin pan, in which there should be no water whatever, other than the wet which may remain in it after rinsing it in the water previous to using.

3rd. Then take a male fish in the same manner as you did the female, and also see that he is quite ripe, and that the milt flows freely; gently press the body, and let the creamy substance fall into the pan amongst the eggs. Stir the eggs and milt together with your hand in a gentle manner, until the eggs appear to be thoroughly mixed in the milt. If you are scarce of male fish, one male will impregnate the eggs of two or three females; this may be done by putting the ova of two or more females into one pan, and using one male. It is better and safer, however, to use small portions of milt from two or more males, because it will be sometimes found that the seed of one male may be bad or barren; the chances in using two or more males will therefore prove more certain.

4th. Do not allow the eggs in the pan, after the milt is applied, to stick together as if they were glued; just so soon as you have stirred the eggs and the milt together, dip them out of your pan with your little measure (holding one thousand eggs), and lay them upon the trays; then place the tray with the eggs in the breeding trough, about one-quarter of an inch under water, and shake it with a tremulous motion once or twice, till the eggs are evenly spread over the tray; then sink the tray and eggs to the bottom of the breeding trough, where they are intended to remain till they hatch out. Commence laying your trays at the lower end of the troughs, so that as the next one above is laid down, the milt that flows off will run over the lower ones. By this means you will get all the benefit of the milt over all of the eggs in that trough or succession of troughs.

5th. After you have laid the eggs down, as above, in your hatching troughs, do not disturb the trays by moving them, nor the eggs by washing them, for five or six weeks. All that is necessary to be done is to pick out any white eggs that show themselves, but let it be done without disturbing the other eggs as little as

possible. The most delicate and trying period of the egg is during the first formation of the embryo, or young fish; after about five or six weeks it will have become strong enough to wash and handle without much fear of danger or loss, but the less handling you give the eggs throughout the whole season, the better. Watch your eggs closely, and pick out daily every white one; if the white eggs are left, they will soon decay and throw off a fungus which will poison thousands of the good ones.

6th. Let as large a flow of water pass over the eggs as you can, without moving them or rolling them about on the trays.

7th. Follow these instructions closely, where circumstances will admit of them, and you may rely upon success in your establishment. Some deviations from the rules laid down will necessarily follow in localities where every convenience cannot be had—as, for instance, taking ova up rivers, and carrying them long distances to the breeding-houses. The system of spawning the fish, and of impregnating the eggs, will, however, apply everywhere alike. During the catching, handling, spawning, and liberating of the parent fish, the most careful and gentle means should be used. Great care should be taken not to wound or bruise the fish, neither should they be allowed to become too much exhausted during the operation of spawning. The loss of fish should be avoided, and it need not occur, (only exceptionally) unless rough or improper means are adopted in the prosecution of the work.

8th. Officers in charge, or their assistants, are not allowed to adopt or practise new theories of their own, or of others, in connection with the science of fish-culture in any of the Government Fish-Breeding Establishments in the Dominion. Suggestions, however, of any kind, having for their object the improvement of apparatus, economy of labour, or any other matter or thing for the advancement of the work of fish-culture, will be thankfully received when properly submitted to the Department of Fisheries at Ottawa or to the Chief Superintendent of Fish Culture at Newcastle, Ontario.

(Signed)

SAMUEL WILMOT,

Chief Supt. Fish Culture.

To _____

Officer in charge Fish-breeding Establishment

at _____

P.S.—Up river Spawning.

If the ova are gathered from the fish up river, and where no conveniences are to be had in laying them on the trays, as described within, the most certain plan for success would be to take several pans with you, and, after spawning one or more fish, and impregnating them by mixing the milt as described, then add, say a pint or more of water, mixing all together well; then lay your pan away in some safe place; in about twenty or thirty minutes the eggs will become separated and hard like peas. The mixing of the water with the eggs will cause them to stick together, and they will remain in this way some twenty or thirty minutes, when they will separate and become hard. Do not try to separate the eggs when sticking together, as it will prove fatal to many afterwards.

Mode of carrying Eggs.

After impregnation, as above mentioned, you can carry the eggs short distances in pails of water, but too many eggs should not be put in a pail, nor should they be allowed to splash about in the pail when carrying them; this will be found very injurious. In carrying any distance, and where time will be taken to perform the work, the surest and best method is to carry them in damp moss in boxes. Take a box made of boards, say 15 or 18 inches square; bore a lot of holes through the bottom of it so that it will not hold water, then take some fine moss, which can be easily collected in the woods, and spread a layer of it over the bottom of the box (the moss should be picked fine and washed clean first); then take a piece of common cheap muslin or thin cotton (which you should prepare yourself with beforehand) of twice the size of the bottom of the box, wash it thoroughly clean first, then spread a single layer of the cotton over the moss, then put a layer of eggs evenly spread on top of the cotton; you may put the eggs two deep, but it is better to have them only one deep; then lay the other thickness of your muslin or cotton over the eggs, then put another layer of moss, say one inch thick, then muslin again and eggs again till you fill up your box, say six or eight or ten layers. The object of the muslin is to keep the moss from the eggs, and that you may lift the eggs cleanly out with the muslin or cotton when you get home with them. If it is very cold weather, the boxes, with the eggs in them, should not be allowed to get too cold or chilled; this can be done by covering them with blankets, or perhaps better to pack them all round in the bottom of your canoe or scow with dry moss, leaves or straw. When you get home with the eggs, don't jar them in opening--lift off a layer of moss, then lift out the eggs with the cotton, like a bag, and gently place them on the trays in your hatching troughs. Pursue this course and your losses in gathering eggs up river will be very trifling.

S. W.

APPENDIX NO. 3
TO THE
REPORT OF THE COMMISSIONER OF FISHERIES.

INQUIRY

CONCERNING
SAWDUST AND MILL-OFFALS

ON THE
LOWER OTTAWA RIVER

AND ITS
TRIBUTARIES.

Printed by Order of Parliament.



OTTAWA :
PRINTED BY MACLEAN, ROGER & CO., WELLINGTON STREET.
1878.



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MR. MATHER'S REPORT

ON DISPOSAL OF

SAWDUST AND MILL-OFFALS

IN THE

OTTAWA RIVER¹

OTTAWA, June, 1877.

SIR,—In conformity with your instructions to me, dated 26th March last, I beg leave to report that I have visited and examined the different saw-mills on the River Ottawa and its tributaries, situated at the City of Ottawa, Hull, Chelsea, Buckingham, North Nation and Hawkesbury.

The first point of enquiry is : “ Is it practicable in each mill to dispose of sawdust by some other means besides placing it in the water ? ”

I find it practicable in every case to dispose of sawdust by some other means besides placing it in the water, but the mill-owners object to the cost as a tax on their trade that they are not able to bear.

The second point to be established by my enquiry is : “ What mode is the most suitable for disposing of sawdust from the saw-mills, other than by placing it in the water ? ”

The only mode that I can propose as most suitable is, that furnaces of proper construction should be built, and the whole useless waste from the mills burned, as it is at only very few country mills where room could be found near by for the accumulation of even one season's sawing ; the bulk of sawdust alone from a mill cutting twenty million feet a year would be about 880,000 cubic feet, or sufficient to cover nearly an acre and a half of ground ten feet in depth ; carting from the mill and piling such a large quantity would also be much more costly than burning in a kiln or furnace. Mill-owners at Ottawa object to burning the waste and sawdust, for the reason, that they have so little room for their mills and piling grounds, and that they would therefore, be compelled to pile lumber so near the furnaces that the risk would be very great and the extra cost of insuring the mills and lumber would be a heavy tax in itself. I have found, by enquiries made at different Insurance Offices, that the increased rate on mills and lumber situated in the vicinity of such furnaces erected in the best manner, would be two per cent or thereabout. Another objection urged by owners of saw-mills driven by water-power is, the impossibility of preventing sawdust from falling into the water, as the mills are not built so as to keep it out, and cannot be remodelled to catch it, as is done in the steam mills of modern construction. I can see no great difficulty in preventing nearly all the sawdust from any water mill from falling into the water, as with proper arrangements nearly all of it could be kept out. The mode adopted in steam mills of carrying it all to a given point by conveyors of iron and wood or cloth belts kept in motion by the machinery of the mill, would not do in the case of most water mills, as they are generally so crowded up in the under-story with the timber and machinery. I propose to carry the sawdust by water let out of the flumes into spouts passing under the machines, and all concentrating into one spout outside of the mill and leading to the furnace, where it would separate from the water and be forced through between two rollers before dropping it on the fire. At the mills at Ottawa, Hull and New Edinburgh, a large portion of the useless slabs and edgings are sold and carted away for firewood, but there would still be sufficient left of short pieces of slabs and waste from lath, bark, &c., to keep a furnace fire open and insure the burning of damp sawdust. At the different mills in the country parts, slabs and all other offal can be run in water to the furnace, as the quantity would be so great as to secure its burning even if wet. At Ottawa, all the offal other than sawdust should be carted, as the quantity that is not sold is compara-

tively small, and what remains should be as dry as possible when put in the furnace. Carting or carrying by tramway to the furnace would be a considerable item of expense, and I have taken it into account in making up the annual cost at each saw-mill.

The third point to which my attention is directed is to find out "at what probable cost in each case could the plan proposed be carried out."

I have very carefully examined and measured the different mills, and in most cases made rough plans to give the extent of the alterations required. A statement in the Appendix shows fairly the first and annual cost of the plan I propose, also the annual capacity of the mills in feet (board measure), and the annual cost at each mill of destroying all the sawdust and other mill rubbish, also the cost per thousand feet of lumber sawed. Statements are also appended of the details of the cost at each mill, both for construction and for the annual expense of working the appliances for destroying the sawdust and other mill rubbish.

There is also a plan appended, showing the position of the different mills at Ottawa and Hull; also showing proposed sites for the different furnaces, in order to show their proximity to the mills and lumber yards.

The cutting capacity of the mills is shown to be 282,000,000 feet, board measure, per season. The cost of erecting furnaces, spouts, carriers and alterations of mills, \$100,127.25. The annual cost of working the whole, besides the present cost of working the mills, \$42,147.50, or about 15c. for every thousand feet of lumber sawed.

The fourth division of your instructions requests me to "consider incidentally in what manner and what extent, so far as I can form an opinion, the navigation of the Ottawa River is affected by existing and progressive accumulations of sawdust and other mill refuse."

The quantity of sawdust that is put into the River Ottawa every year, between Ottawa and Grenville, is not less than 12,300,000 cubic feet, amounting in twenty years to 246,000,000 cubic feet, a bulk which is considerably increased by bark, edgings, buttins, slabs and other mill rubbish. After I had made these figures, I felt myself incompetent to give an opinion, without making an actual examination of the river, so that I might be able to discover where such a large bulk of material, could be deposited. You kindly granted my request, and I proceeded to find out where and to what extent accumulations exist in order that I might be able to form a correct opinion as to how the river is now, or may be affected thereby. I began my enquiry by examining the plans in possession of the Board of Works, made by Mr. Shanly, C.E., in connection with the survey for the Ottawa Ship Canal. I got tracings of these plans made, covering about twelve miles, with his soundings marked thereon, in order that I might compare them with my own, making proper allowance for the difference in the height of water. I considered that I could then approximate the rate at which the river has filled up since 1858. I found, however, that Mr. Shanly had marked no depth over 30 feet, the river being much deeper in most places. I could make no comparison in the way I intended.

I then determined to sound the river at a great many places in the navigable channels, and in the bays and about the shores and wharves, and find from that operation what the bottom is composed of. I got a sounding-lead made with an apparatus on it for bringing up a part of the bottom, which I may say it did effectually.

I hired a small steam launch and spent seven days in it between Grenville and Ottawa, taking in all 143 soundings, [putting specimens of what was taken up in bottles properly labelled for reference.

When beginning at Grenville, I saw Hugh Cumming, the lock-master on the Canal there. I asked if he had ever been troubled with quantities of sawdust and mill rubbish finding its way into the entrance and locks of the canal. He replied that his experience was over twenty years, and that he had seen the entrance and locks dry, but had never seen any gathering of sawdust or mill rubbish.

I have made up a table of the soundings and annex it for reference. It shows where they were taken, the depth of water and the sort of material found at the bottom.

Of the 143 soundings taken you will observe that the matter brought up from the bottom in 26 contained more or less sawdust; in 117 soundings the matter was pure sand, gravel or clay; in seven places where the sawdust was found it was in the navigable channel of the river; in 19 places it was found near the shore or behind piers or wharves and in eddies; 57 soundings were taken in bays and near the shores, and in places where sawdust covered the surface of the water, in order that no chance might be lost in discovering where it is deposited; 19 soundings of the 57 contained sawdust and 38 pure clay, gravel or sand. There were 31 of these soundings out of the channel taken below Kettle Island, and I found sawdust at six of them; from Kettle Island and above it there were 26 soundings taken outside of the navigable channel; sawdust was found in thirteen places.

Of the seven places where sawdust was found in the navigable channel of the river, three were below Kettle Island and four above.

There are no large accumulations of sawdust that I could discover on any part of the River Ottawa below the River du Lièvre. At the mouth of that river and between it and the Buckingham wharf, the north shore of the Ottawa is very flat and the water shallow. The shallowness of the water is apparently caused in part by sawdust, but it does not extend out to the navigable channel.

I examined very carefully among the islands at the mouth of the Blanche, about twelve miles below Ottawa, thinking that the numerous bays and channels would be likely to hold sawdust. I had also been told by several people that there was a great deal of it there. The soundings in the bays and channels brought nothing but pure sand. I went on shore at several places and found lying on the banks small quantities of dry sawdust where it had been left by the receding water. I also found there, and at every place where I went on shore, large quantities of short slabs, edgings, and buttings, in many places covering the meadow and preventing the growth of the grass which the farmers make into wild hay.

There is a good deal of sawdust in the small bay at the end of the cliffs below Rockcliff; there are also slabs, bark and edgings. The gathering does not extend to the current of the river.

I found the largest deposit of sawdust in the bay opposite the Gatineau River near the shore. It is now five feet above the water; twenty years ago there was deep water close into shore, and I have secured rafts there for the winter, tied close up to the rocks.

I have noticed for several years that this bank does not increase in width towards the river, the sweep of the eddy apparently controls its further accumulation. Quite close to the bank of sawdust in the bay there is twenty feet of water; it deepens quickly to forty-five, seventy-five and eighty feet. At all these depths the soundings were in pure sawdust, twenty feet outside of a line between the two points forming the bay, the water is eighty feet deep, and the bottom a few chips and coarse sand.

In McKay's Bay, immediately above, there is also a gathering of sawdust, but not of the same extent; it is also governed by the current of the river, and there is little of it outside of the two headlands that form the bay.

In the bay above the Queen's Wharf, there is ninety feet of water close in to the shore, and the bottom bare rock, although the surface of the water there is always thickly covered with sawdust when the wind blows in that direction to carry it there.

There is a large gathering of mill rubbish at the entrance of the Rideau Canal, and the water is now shallow from that cause, where at first it must have been very deep; for nearly 200 feet from the lock the depth is a little less than the sill. From there it gradually deepens, and at 400 feet from the lock it is forty-one feet; the water gradually deepens from there. Still, to the outside of the bay, where it is ninety feet, immediately outside of the point, the bottom is bare rock in ninety feet of water. There is a large quantity of slabs and edgings, mixed with sawdust, in this gathering.

In the bay above the entrance to the canal, there is very little sawdust or mill rubbish of any sort, as a strong eddy sweeps it at all stages of water.

In the bay below the outlet of the timber slide, on the north side of the river, and at the upper end of Mr. Eddy's wharves, there is no deposit of sawdust or mill refuse, except a few chips lying on bare rock, the water is sixty-one feet deep. I am informed by those running logs in this slide, that there is a good deal of trouble about the booms, caused by the rubbish from the mills on the upper end of the slide channel.

Along the front of the wharves, from Eddy's downwards, on the north side, the bottom is swept by the current. There is no deposit at the wharves in connection with Messrs. Gilmour's steam mill, the bottom there being pure clay.

On the north side, between Eddy's wharves and the Suspension Bridge, there is an accumulation of slabs, sawdust and edgings every season, after the water falls, and the current ceases to be strong enough to carry it away; but it is always cleared off by the high water of the following spring.

The wharves facing the river on the south side from the Suspension Bridge downwards, have never any accumulation in front, as the current, both in high and low water, is too strong to allow sawdust or mill rubbish of any sort to lie at rest.

The bay south of the outlet of the south timber slide is gradually filling up with sawdust and mill rubbish, and if it continues to fill up as it has done lately, there will soon be no chance to ship lumber at the wharves, except during high water.

When I examined the river in 1872, as one of the Commission then appointed to "inquire into the condition of navigable streams," I found a large quantity of slabs, edgings and sawdust collected behind the rocky island in front of Messrs. Batson and Currier's mills. I now find it all gone, and the bottom quite clear, with nothing but a little sawdust floating in lee of the island.

I now proceed to notice where sawdust was found in the navigable channel of the river.

Opposite the point on the south shore above L'Orignal, the water is sixty-two feet deep; the bottom is very soft blue clay, and the sawdust hardly perceptible.

Near an island below the North Nation River the water is fifty-six feet deep; bottom, fine sand with a few specks of sawdust.

At the mouth of the Gatineau, in forty feet of water, bottom pure sand, sawdust hardly perceptible.

Opposite McKay's Bay the water is seventy feet deep; bottom, pure sawdust and woody fibre, all quite fresh.

Opposite Rideau Falls, water sixty feet deep; hard rock and a very little clean sawdust.

Opposite Mr. Reynold's house, water sixty feet deep; bottom, gravel, clay and decomposed sawdust.

I have now stated where, and to what extent, I have found accumulations of sawdust and mill-rubbish in the River Ottawa. I will proceed also to state the opinion I have formed as to its effects on navigation at present and in the future.

At present, with the water of the river at a medium height, there is no injury to navigation; when the water is low it is injured at the entrance to the Rideau Canal, and at the docks south of the south timber slide. McKay's and Keefer's Bays have less capacity for wintering steamers, barges and rafts than heretofore, and neither of these places could now be used for ordinary traffic with steamers and barges. Navigation is not affected in any way, by accumulations of sawdust or mill-rubbish, at any other points between the City of Ottawa and Grenville.

It is difficult to say where the twelve million feet of sawdust and mill-rubbish, annually deposited in the Ottawa, goes to; but it is evident, from the investigations made, that only a small proportion of the whole remains in the river; it is probable that a large quantity lies in the still water of the Lake of Two Mountains, a portion also finding its way to the River St. Lawrence. There is no evidence that any noticeable quantity remains in the navigable channel of the river where the water is in motion. I am, therefore, convinced that no accumulation, injurious to navigation in the future, can ever take place there.

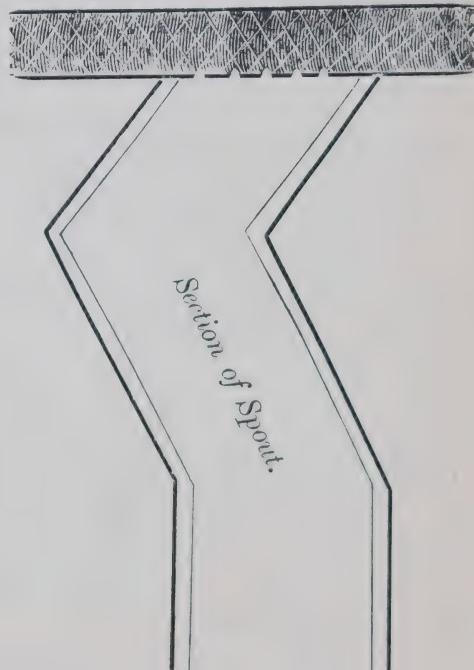
There is no evidence that any accumulation likely to injure navigation will ever happen at any wharf or bay below Rockcliff, neither is there any evidence to shew that sawdust or other mill-rubbish will collect above that point, except where it now shews itself; but, if the mills continue to put sawdust and rubbish in the water, it will gradually collect till the navigation there is entirely destroyed.

The fifth point of my instructions is to "examine the mills, as to what arrangements are desirable to best guard against the workmen putting other mill refuse into the water; in order that the enforcement of the law may be less difficult and expensive to the public, and to prevent evasions." I know from experience, that it is very difficult to prevent workmen from putting mill refuse into the water, unless it is made impossible for them to do so. All mills should, therefore, have the floor under the sawing floor; that is, the one nearest the water, made close all over, with no openings except a hatchway, well removed from all the sawing machinery. The only other necessary opening in this floor, would be where the pitman or connection between the water-wheel and sawgate works, and that could be covered by a flexible attachment secured to the pitman and the floor.

If it should be arranged in any case that sawdust only should be allowed to fall into the water, and that all other matter, whatever, should be kept out; the lower floor would still require to be laid close all over, and no openings left except one under each machine; these openings should be filled with gratings made of round iron rods, five-eighths of an inch in diameter. The spaces between should not be more than one inch each way, each opening under all machinery, except sawgates, should not be more than nine inches square, and, in addition to the grating, should have a short spout the same size as the hole, and made crooked to prevent the workmen from putting down short edgings. The spout should be made so:—

Mill Floor.

Openings under saw-gates should have racks made with movable frames, and bolted down in such a manner as would make it difficult for the ordinary workmen to raise them.



All windows in the walls of mills overlooking the water should be covered with wire netting, the meshes of which should not be more than one inch square. Fences should also be put round all platforms contiguous to the water, wherever it could be done without interfering with the operations of the mill. If owners of saw-mills must arrange their mills as above suggested, there need be no delay in having it done, as the doing of it would interfere but very little with the work of the mill. As there is no law by which owners of mills could be compelled to make such changes, it would be necessary to have such arrangements as would make them understand that if it were not done the existing law would be rigidly enforced against them. In order to have the whole properly done, it would, no doubt, be necessary to have a competent person whose duty would be to instruct owners of mills, and see that the required alterations were all properly made, so that there would afterwards be no necessity for having any specially skilled person employed about it, as any fishery officer could then easily detect any change or wilful violation of the arrangements.

In connection with the separate application made by the proprietors of the Hawkesbury mills, you request me to examine the premises and report upon alleged peculiarities in support of their claim for exemption.

I have also considered in the same connection the petition of inhabitants along the banks of the River Ottawa, below Hawkesbury.

I visited Hawkesbury mills on the 27th March last, and made an examination with regard to the statement made in said petition, namely, that, "owing to the peculiarities of the location of the Hawkesbury mills the erection and running of slab grinders would involve very great expense, besides causing very great inconvenience." I found the above statement quite evident and did not go into any particular calculation in connection with it. I then took measurements, with a view to proposing a plan for consuming the entire slabs and sawdust. I found no difficulty in deciding that the whole could be collected by suitable appliances and burned. I also fixed on a site near the mills suitable for furnaces, and which was also agreed to by the manager for the proprietors.

The cost of the erection of furnaces and suitable appliances for conveying the offal would amount to \$18,835, and the annual expense to \$5,333, as per statement annexed.

The quantity of lumber sawed annually is about thirty millions of feet in board measure; the cost for destroying the refuse would therefore be equal to eighteen cents per thousand feet of lumber sawed. The above sum is three cents per thousand feet more than the average cost for doing the same work in all the other mills on the River Ottawa, and is accounted for as follows:—

The situation and construction of the Hawkesbury mills are quite peculiar. They have no arrangements for regulating the height of the water in front of the flumes, which makes the difference between high and low water the same as that in the river itself, consequently the mills are almost submerged at high water, and nearly dry at low water. There are four mills placed at distances apart, which make them cover a space of over 800 feet in width, and this adds very considerably to the extent of the machinery for collecting the refuse. As the builders of the mills had not contemplated such a contingency, the framing timbers and machinery are very much in the way, and there is little facility for putting in any more. The only practicable plan that I could devise to concentrate the sawdust from the machine, is to carry it in water, and the great variation in the height of the water at different parts of the sawing season, would make it necessary to employ pumps. The mills being very large, and doing the most of their work in three months, two furnaces would be necessary. These, and other peculiarities of situation and construction, make it cost more to destroy the refuse at Hawkesbury than the average cost of the other mills on the Ottawa.

With regard to the further assertion in the petition of the proprietors of the Hawkesbury mills, "that the refuse from them, although put in the river, does no damage to navigation," I have further to say that, as the river was blocked by ice

when I was there on the 26th March, I could make no satisfactory examination, but went there again on 16th May.

I found the mills all at work, and all the refuse going into the river as usual. I got a boat and ran over all the rapids as far as Carillon, making a minute examination of the river all the way. I found no accumulation of mill refuse anywhere in the navigable channel of the river, although in three places near the mills I found dams formed at the sides, but in such a way as to throw the water into the navigable channel and improve the navigation; nearly all the slabs and edgings leaving the mills are thrown on the shores of the river in regular and even layers, and very little goes as far as Carillon. I saw no collection or evidence of the existence of sawdust anywhere, except a little at the end of the steamboat wharf at Carillon.

I have been about the rapids between Grenville and Carillon in connection with taking down deal rafts since 1857, and my late examination only confirms my previous impressions. I am now quite convinced that no damage to navigation has been done in the past, or is likely to be done in the future between Grenville and Carillon by the practice of putting saw-dust and mill-rubbish in the River Ottawa from the Hawkesbury Mills.

With regard to the petition of 1,312 inhabitants on both banks of the Ottawa between Hawkesbury Mills and Bout de L'Isle de Montreal, praying that the proprietors of the Hawkesbury mills may still be allowed to throw their slabs and edgings in the river as heretofore, I have to say, that I have seen, every year large numbers of people gathering and rafting up mill refuse on both banks of the Ottawa between Hawkesbury Mills and Carillon, and have also seen them taking it down in rafts to Lachine and Bout de L'Isle. I saw the same being done when there on the 16th instant. I found, on making enquiry, that the parties gathering and taking away mill refuse were principally from near Montreal, and that they buy the right to gather it from the farmers who own the shores of the river where it is deposited by the current. I also learned that the demand is so great that it is always cleared away at the end of each sawing season, and that it has never accumulated from one year to another. I also learned that it is a personal benefit to many and have no doubt that the statements made in the petition are substantially correct.

I have now noticed all the different points set forth in your instructions, treating each in the manner my previous experience has suggested.

All being respectfully submitted.

I am, Sir,

Your obedient servant,

JOHN MATHER.

To the Hon. A. J. SMITH,
Minister of Marine and Fisheries,
Ottawa.

I have no scruple in saying that I have the best refuse burner known. I will go to your place if you wish and build for you by contract, or superintend the building by the day, or, if you wish only to consult me with regard to the matter, I will come to your place and advise you, my time and expenses being paid.

A furnace to clear mill cutting—

125 M feet to 175 M per day costs.....	\$4,500
75 M feet to 125 M " "	3,800
50 M feet to 80 M " "	3,200
30 M feet to 50 M " "	2,500
20 M feet to 35 M " "	2,000
10 M feet to 25 M " "	1,500

Furnaces of the capacity here given would burn, if need be, all refuse coming from the logs. These are about the figures for furnaces and carriers all complete; but the cost of foundations, the cost of brick, the difference between one mill and another to get the carriers in, cost of freight, and other contingencies make it impossible for me to give any one definite figures without seeing mill and location. Please answer soon, as I have a communication from Mississippi to-day, and may chance to go from home.

Yours,

WILLIAM GLUE,

Ex-Mayor, Muskegon, Michigan.

REPORT ON PETITIONS OF MILL-OWNERS, AND ORDERS IN COUNCIL THEREON.

OTTAWA, 9th October, 1876.

Having reference to the accompanying petition from certain owners of saw-mills on the Ottawa River, in this vicinity, praying for an exemption under the Statute 36 Vic., Cap. 65, relating to the better protection of navigable streams and rivers, the undersigned has the honor to report that as the petitioners allege the impracticability of so adapting their mills as to dispose of sawdust otherwise than by putting it into the stream; it is advisable to employ some competent person to examine these mills, and report his opinion on this point, before determining the subject of their petition.

The whole respectfully submitted.

A. J. SMITH,

Minister of Marine and Fisheries.

To His Excellency the Governor General in Council.

MAY IT PLEASE YOUR EXCELLENCY.

The petition of the undersigned humbly sheweth:—

That they are engaged in the business of manufacturing sawn lumber in the City of Ottawa and vicinity.

That their mills are driven by water power, and consequently they find it impossible to prevent sawdust and rubbish from them from falling into the river.

That they observe that a Bill has passed both Houses of Parliament, entitled: "An Act for the better protection of navigable streams and rivers," which prohibits the casting of sawdust, slabs, edgings, and rubbish into navigable streams, unless it can be shown to the satisfaction of the Governor in Council that the public interest will be served by the exemption of any stream or river in Canada, or any part or parts of any such river or stream, from the operation of this "Act, in whole or in part," in which case the Governor in Council shall have power by proclamation to declare any such stream or river, or part or parts thereof, exempted from the operation of this Act, and shall also from time to time have power to revoke the same.

That your petitioners can bring evidence to show that the throwing of sawdust and other rubbish, other than slabs and edgings, into the Ottawa River, or into any rapidly running river, such as the Ottawa, cannot be injurious to the navigation of such river, and that to enforce the said law to the letter, will cause serious damage to your petitioners, and practically close down their mills.

Your petitioners, therefore, pray that under the fourth clause of said Act, Your Excellency in Council, may be pleased to exempt their mills in the city of Ottawa and vicinity, from the operation of said Act, except in so far as it relates to the throwing of slabs and edgings into the river.

And your petitioners, as in duty bound, will ever pray.

BRONSON & WESTON,
J. R. BOOTH,
PERLEY & PATTEE,
E. B. EDDY,
Per J. M. T. HANNUM,
J. McLAREN & Co.,
Per JOHN HENDERSON,
GILMOUR & Co.,
Per M. CUNNINGHAM,
LEVI YOUNG,
A. H. BALDWIN,
Per Thos. PORTER.

Ottawa, 31st September, 1876.

COPY of a Report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor General in Council, on the 25th October, 1876.

Upon a Petition from certain owners of saw-mills on the Ottawa River, in this vicinity, praying from an exemption under the Statute 36 Vic., Chap. 65, relating to the better protection of navigable streams and rivers,

The Honorable the Minister of Marine and Fisheries, in a Report, dated 9th October, 1876, states that as the petitioners allege the impracticability of so adapting their mills as to dispose of sawdust otherwise than by putting it into the stream, it is advisable to employ some competent person to examine these mills and report his opinion on this point, before determining the subject of their Petition.

The Committee concur in the Report of the Minister of Marine and Fisheries, and submit the same for Your Excellency's approval.

Certified,

W. A. HIMSWORTH,
Clerk Privy Council

COPY of a Report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor General in Council, on the 26th March, 1877.

On the recommendation of the Honorable the Minister of Marine and Fisheries, the Committee advise that in pursuance of the Order in Council of 25th October last, John Mather be employed to ascertain the practicability of disposing of sawdust from saw-mills on the Ottawa River otherwise than by placing it in the stream.

Certiifid.

W. A. HIMSWORTH.

Clerk Privy Council

COPY of a Report of a Committee of the Honourable the Privy Council, approved by His Excellency the Governor General in Council, on the 28th March, 1877.

On the recommendation of the Honourable the Minister of Marine and Fisheries, the Committee advise that a sum of \$150.00 be applied from the fund for "unforeseen expenses," towards paying the cost of inquiries respecting the disposal of sawdust and mill-rubbish in navigable streams, under the Statute 36 Vic., Cap. 65.

Certified.

W. A. HIMSWORTH,

Clerk Privy Council.

DEPARTMENT OF MARINE AND FISHERIES,

FISHERIES BRANCH,

OTTAWA, 6th March, 1877.

The undersigned begs to recommend that, in pursuance of the Order in Council of 25th October last, John Mather be employed to ascertain the practicability of disposing of sawdust from saw-mills on the Ottawa River, otherwise than by placing it in the stream.

The whole respectfully submitted.

A. J. SMITH,

Minister of Marine and Fisheries.

OFFICIAL INSTRUCTIONS TO JOHN MATHER, Esq.

DEPARTMENT OF MARINE AND FISHERIES,

FISHERIES BRANCH,

OTTAWA, 26th March, 1877.

SIR,—I have the honor to inform you, by direction of the Minister, that, under an Order of the Governor General in Council, dated 25th October, last, adopted on the petition (copy enclosed) of certain owners of saw-mills on the Ottawa River, in this vicinity, praying for partial exemption under the Statute 36 Vic. Cap. 65, relating to the better protection of navigable streams and rivers, on the ground that it is impracticable to so adapt their mills as to dispose of sawdust otherwise than by putting it into the said stream, and that in consequence of such actual inability they are compelled to either expose themselves to the penalties provided by the said Statute, or abandon their industry, it was directed that a competent person should be employed to examine these mills and report his opinion on the same. A subsequent Order of the Governor General in Council, dated 26th instant, appoints you to perform this duty; and I am requested to address you the following instructions:—

The Act in question provides that, "No person, nor tenant of any saw-mill, nor "any workman therein, nor other person or persons whatsoever, shall throw or cause "to be thrown, or suffer or permit to be thrown, any sawdust, edgings, slabs, bark or "rubbish of any description whatsoever, into any navigable stream or river, either "above or below the point at which such stream or river ceases to be navigable."

It also provides, "That when it can be shown to the satisfaction of the Governor "in Council that the public interest would not be injuriously affected thereby, the "Governor in Council shall have power, from time to time, by Proclamation in the "Canada Gazette, to declare any such stream or river, or part or parts thereof, "exempted from the operation of this Act, in whole or in part, and shall also have "power from time to time to revoke the same."

The Government has heretofore had under serious consideration, the situation of saw-mills on the Ottawa River, and the apparent difficulties attending compliance with these statutory requirements. As regards all other mill-refuse, excepting sawdust, it is determined that the law shall be rigidly enforced; the principal manufacturers themselves, perceiving the necessity, and admitting the practicability

of disposing of it so as to avoid any further injury to the public interest. But the alleged impossibility to dispose of sawdust, otherwise than as at present practised, deserves special attention. In adopting the provisions of the existing law, as you are aware from your official connection with the Special Commission of Enquiry which preceded its adoption in 1873, the Legislature is presumed to have taken cognizance of all of the practical objections which could be urged against such prohibitions, and of their possible effect on this most important branch of the manufacturing industries of the country. The proviso relating to exemption indicates that the only admissible reason for non-compliance in each instance would be that the public interest is not injuriously affected by such exemption. This provision, you will perceive, is otherwise absolute and makes no allowance for matters of business, cost or private inconvenience. The Government is, nevertheless, convinced that, in dealing with particular cases affecting an enterprise of such vast importance, and in which a great amount of capital and labor is invested, the question of practicability and expense is very justly entitled to be considered. But the obvious interest which all parties would have in avoiding the legal obligations imposed by the Statutes, makes it necessary to examine closely and impartially into any alleged inability to conform to its provisions. This investigation, it is considered, need not, in the interest of the public or that of the mill-owners, be a merely technical one, but should combine, with some mechanical judgment, the experimental knowledge of other circumstances connected with milling operations which a competent person familiar with the manufacture has had opportunities to observe. Under these conditions, the Minister desired me, prior to the passage of the last Order in Council above named, to communicate with you and ascertain if you were willing to make the requisite examination. After considering the proposal, you have assented.

Before suggesting the probable points of enquiry, I am to state that this examination will not be confined to the saw-mills at the Chaudière, but should embrace all of the saw-mills on the River Ottawa down as far as Grenville; and may relate also to such of the saw-mills on the tributaries of the Ottawa as by their connection with the main stream necessarily contribute, through the discharge of sawdust, to any obstructive accumulations which actually do now or threaten to endanger the navigation of the Ottawa River.

The points to be established are as follows:—

1. Is it practicable in each mill to dispose of sawdust by some other means besides placing it in the water?
2. What mode do you find most suitable?
3. At what probable cost in each case can this plan be carried out?
4. Incidentally it may be considered in what manner and to what extent, so far as you can form an opinion, the navigability of the Ottawa River is affected by existing and progressive accumulations of sawdust and other mill-refuse.
5. Please examine these mills as to what arrangements are desirable to best guard against the workmen putting other mill refuse into the water, in order that the enforcement of the law may be less difficult and expensive to the public, and to prevent evasions.

Regarding the separate application made by the proprietors of the Hawkesbury Mills, a copy of which is also herewith, you will please examine the premises and report upon the peculiarities which they allege in support of their claim to be exempted.

I am further to enclose the copy of a petition from inhabitants along the River Ottawa below the Hawkesbury Mills.

A cheque for \$100 will be sent you to-morrow, against which sum you will please reckon your necessary disbursements in accounting therefor.

I am, Sir,

Your obedient servant,

W. F. WHITCHER,

Commissioner of Fisheries.

JOHN MATHER, Esq.,
Ottawa.

APPENDIX No. 1.

STATEMENT giving Names of Owners of Mills on the River Ottawa and its Tributaries between Ottawa and Grenville, also the annual capacity of the same, the cost of erecting appliances for burning saw-dust and other mill rubbish, the annual cost of burning sawdust and other mill rubbish, and the cost per thousand feet in Board Measure on lumber sawed.

Owners' Names and Locality of Mills.	Annual capacity in feet B. M.	Cost of building Furnaces, &c.	Annual cost.	Cost per feet
				B. M.
		\$ cts.	\$ cts.	Cents.
Bronson, Weston & Co., Ottawa ..	20,000,000	6,389 20	2,888 00	14½
do do do ..	9,000,000	4,560 00	1,643 50	18½
A. H. Baldwin, do ..	20,000,000	4,949 25	3,044 00	15
Levi Young, do ..	15,000,000	5,350 00	1,635 00	11
J. R. Booth, do ..	22,000,000	8,757 00	4,805 00	22
Perley & Pattee do ..	25,000,000	10,353 05	4,335 00	17½
Sherman, Lord & Co., Hull	18,000,000	4,641 00	3,014 00	17
E. B. Eddy, Hull	50,000,000	13,173 00	7,750 00	15½
W. McLymont & Co., New Edinburgh.....	10,000,000	7,740 00	1,299 00	13
Jas. McLaren & Co., New Edinburgh.....	18,000,000	6,900 00	3,315 00	18
Gilmour & Co., Chelsea	30,000,000	11,476 00	3,547 00	12
Ross Brothers, Buckingham.....	20,000,000	5,461 00	1,821 00	9
Jas. McLaren & Co., Buckingham.	15,000,000	5,068 00	1,631 00	12
John A. Cameron & Co., North Nation.....	10,000,000	5,309 75	1,430 00	14
Total.....	282,000,000	100,127 25	42,157 50	*14·95

* Average.

APPENDIX No. 2.

BRONSON, WESTON & Co.'s MILLS, OTTAWA.

1 Furnace.....	\$4,000 00
1 Elevator.....	1,000 00
Small spout, 376 feet, at 55c.....	206 80
Medium spout, 96 feet, at 90c.....	186 40
Large size, 330 feet, at \$1.20.....	396 00
Sundries, lath mill.....	200 00
Sundries, large mills.....	500 00
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	\$6,389 20

Annual Cost.

10 per cent. on \$6,389.....	\$638 00
2 men at bark, &c., 150 days each, 300	
3 men below mill, 150 days each, 450	
1 man on mill floor, 150 days, 150	
1 man at lath mill, 150 days, 150=1,050, at \$1.25. 1,312 50	
2 horses and carts and men, 150 days each, 300, at \$2... 600 00	
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	\$2,550 50

Keeping up spouts—

1 man, 150 days, at \$1.25.....	187 50
Furnace	150 00
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	\$2,888 00
20 millions of feet sawed, at 14½c.....	2,900 00
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BRONSON, WESTON & Co.'s MILLS, OTTAWA.

1 Furnace, say.....	\$3,000 00
Elevator.....	500 00
Power, say.....	500 00
Chain carriers, say 140 feet, at \$4.....	560 00
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	\$4,560 00

Annual Cost.

10 per cent. on \$4,560.....	\$456 00
1 man on mill floor, 150	
1 man at bark, 150	
2 men below, 300	
1 man at furnace, 150=750 days, at \$1.25.....	937 50
Keeping up chain carriers.....	100 00
Furnace, say.....	150 00
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	\$1,643 50
9 million feet sawed, at 18½c.....	1,642 50
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A. H. BALDWIN'S MILLS, OTTAWA.

Furnace, say.....	\$3,000 00
Elevator, say.....	1,000 00
155 feet of small spout, at 55c.....	85 25
160 feet of larger spout, at 90c.....	144 00
600 feet of large to furnace, at \$1.20.....	720 00
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	\$4,949 25

Annual Cost.

10 per cent. interest on \$4,949.....	\$494 00
1 man carrying debris from lath mill ;	
1 man on mill floor keeping clear ;	
3 men at bark and taking slabs and bark to furnace ;	
1 man below sawing floor ;	
6 men for 160 days, but double for double watch—1,920 days, at \$1.25.....	2,400 00
Tear and wear of furnace, say.....	150 00
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20 million feet, at 15c. per M.....	\$3,044 00
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20 million feet, at 15c. per M.....	3,000 00

LEVI YOUNG'S MILLS, OTTAWA.

Furnace, say.....	\$4,000 00
Elevator, say.....	500 00
1 Water-wheel and flume.....	500 00
90 feet of spout at \$1.....	90 00
40 feet of chain carrier at \$4.....	160 00
Fittings about Mills say.....	100 00
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	\$5,350 00

Annual Cost.

10 per cent. on above outlay.....	\$535 00
4 men extra for 180 days—720—at \$1.25.....	900 00
Sawing at night, 2 each watch.....	
Say annual repairs—chains, furnace.....	200 00
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	\$1,635 00
15 million feet sawed, at 11c. per M.....	1,650 00
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J. R. BOOTH'S MILLS, OTTAWA.

Furnace cost say.....	\$5,000 00
369 feet of rock excavation 369x17x6 feet average 11 $\frac{1}{2}$ less 1=10 $\frac{1}{2}$ x6 feet=864 yards, at \$1.....	864 00
$\frac{1}{2}$ of above paid by Pattie & Perley	
Proportion of cost of elevating end.....	1,000 00
Main spout in excavation, 369 feet, at \$1.....	369 00
1,030 feet of small spouts at 55c.....	566 50
355 feet of medium spouts at 90c.....	301 50
Blasting from mill to main spout, 55x17x6 feet, 208 yards at \$2.....	416 00
Blasting for small spouts, 60 yards.....	240 00
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	\$8,757 00

Annual Cost.

10 per cent. interest on \$8,757.....	\$875 00
6 men keeping mill clear of bark, slivers, &c., above and below, 180 days=1,080 ;	
2 men at butting saws, edges, &c., 180 days = 360 ;	
1 man at lath saws, 180 days ;	
2 men at bark, 360 = 1,980 days, at \$1.25.....	2,475 00
3 horses, men and carts, 180 = 540 days, at \$2.....	1,080 00
1 man at furnace, 180 days at \$1.25.....	225 00
Annual tear and wear, \$4,805	

	\$4,655 00
22 million feet sawed at 22c.....	4,870 00

MESSRS. PERLEY & PATTEE'S MILLS, OTTAWA.*Slabs, Bark and Sawdust.*

Furnace, say.....	\$ 5,000 00
231 feet of main cutting in rock 12 to 17x6 feet, 693 yards at \$2—\$1,386	
369 feet of which Mr. Booth would be $\frac{1}{2}$ share, 369x17 to 6 feet = $11\frac{1}{2}-1=10\frac{1}{2}$, 864 yards at \$1=\$864...	2,250 00
Proportion of cost of elevating end.....	1,000 00
Main spout in excavation, 231 feet, at \$1.20—\$227.20...	
Share with J. R. Booth of 369 feet at \$1— 369 =...	646 20
Chain carriers in lath mill, 151 feet, \$4.....	604 00
Small spouts in main mill, 329 feet at 55c.....	180 95
Large " " 191 feet at 90c.....	171 90
Say sundries.....	500 00

	\$ 10,353 05

Annual Cost.

10 per cent. on above outlay of \$10,353.....	\$1,035 00
6 men taking out bark, &c. and filling into carts, 180 days at \$1.25.....	1,350 00
3 horses, men and carts, 180 days at \$2.50.....	1,350 00
2 men at logways, bark, &c., 180 days at \$1.25.....	450 00
Waste to burn sawdust, said now to be worth \$28 per week—lath mill 30 weeks, 1,840.00	

	\$ 4,185 00
Tear and wear.....	150 00

	\$ 4,335 00
25 million feet of lumber at $17\frac{1}{2}$ c. per M. feet.....	4,375 00

SHERMAN, LORD & Co.'S MILLS, HULL.

Furnace, say.....	\$3,000 00
Elevator, water-wheels flume, say.....	1,000 00
Small spouts, 55 feet at 55c. per foot.....	30 25
Medium spout, 202 feet at 65c. per foot.....	131 30
Large size spout, say 400 feet at \$1.20.....	480 00

	\$4,641 55

Annual Cost.

10 per cent interest on \$4,641	\$464 00
Say three men and a boy about mills, 150 days—double watch = 300 days of 3 men = 900 at \$1.25.....	1,125 00
One boy, 150 days of double watch = 300 days of 1 = 300 at \$1.....	300 00
One man at spouts and furnace, 300 days, at \$1.25	375 00
Two horses and carts, 150 days = 300 days, at \$2.00....	600 00
Keeping up furnace 150 days = \$3,014	
	\$2,864 00
18 million feet sawed, at 17c.....	3,060 00

E. B. EDDY'S MILLS, HULL.

Cost of furnace on west side, say.....	\$6,000 00
" " east "	3,000 00
Two elevators.....	1,500 00
Chain carriers, 130 feet at \$3.....	390 00
Small spouts, say 201 feet, at 55c.....	110 55
Medium spouts, say 762 feet, at 90c.....	685 80
Large spout for west side, 265 feet at \$2.....	530 00
do east side, 227 feet at \$1.65.....	457 05
Sundries, say.....	500 00
	\$13,173 40

Annual Cost.

10 per cent interest on \$13,173.....	\$1,317 00
2 men and one boy at each mill, night and day, four mills in all = 16 men, 150 days = 2,400 men at \$1.25	3,000 00
8 boys, 150 days = 1,200 days at \$1.....	1,200 00
2 horses, carts and men each watch, 600 days at \$2.....	1,200 00
1 man for each furnace = 4, 150 days = 600, at 1.25....	750 00
Tear and wear of chains and furnace.....	300 00

Keeping up two furnaces, &c., \$7,767.

	\$7,767 00
Say 15 millions of feet sawed at 15½c.....	7,750 00

W. McLYMONT & Co.'s MILLS, NEW EDINBURGH.

Pier in front of mill in 50 feet of water, 40x40x70ft.....	\$4,000 00
Furnace.....	3,000 00
185ft. of chain-carrier and elevator at \$4.....	740 00

Annual Cost.

Interest at 10 per cent on \$7,740.....	774 00
2 men to attend to chains and furnace, say 300 days of one man, at \$1.25.....	375 00
Repairs on chains and furnace, say.....	150 00
10 million feet of lumber sawed, at 13c.....	\$1,299 00
	1,300 00

JAS. McLAREN & CO.'S MILLS, NEW EDINBURGH.

Pier for carrying furnace, say 40x40x24.....	\$2,000 00
1 furnace.....	3,000 00
Chains outside of mill, say 100 ft., \$4.....	400 00
" inside " 200 ft., \$2.50.....	500 00
Power to drive chains.....	500 00
Hoppers, spouts, &c.....	500 00

	\$6,900 00

Annual Cost.

10 per cent on above outlay	\$690 00
1 man, night and day, at furnace and chains, say for 150 days, \$1.50 per day, \$3.....	450 00
3 men, night and day, clearing mills, say for 150 days, at \$1.25 per day, \$2.50.....	1,125 00
1 horse and cart, carting to furnace, with man, night and day, 150 days, at \$2.50—\$5.....	750 00
Tear and wear of chains and furnace.....	300 00

	\$ 3,315 00
Say 18,000,000 feet, per 150 days, at 18c.....	3,240 00

Sash Factory and Planing Mill.

Suction fan, say.....	\$200 00
200 feet of spouts, say 50c.....	100 00

	\$300 00

Annual Cost.

Say 10 per cent interest.....	\$ 30 00
1 man in planing mill, 300 days; 1 man in sash factory, 300 days=600 at \$1.25.....	750 00

	\$780 00

GILMOUR & CO., GATINEAU MILLS, CHELSEA.

Cost of furnace at Rapids Mills, say.....	\$4,000 00
" " for burning sawdust, &c.....	3,000 00
Cost of changing Rapids Mills, say.....	1,500 00
243 feet of small sawdust spouts, at 55c.....	133 65
220 " medium " at 90c.....	198 00
1,300 " large size " at \$1.50.....	1,950 00
65 " chain carrier, \$3.....	195 00
Sundry changes about mills, say.....	500 00

	\$11,476 00

Annual Cost.

10 per cent on \$11,476.....	\$1,147 00
2 men at furnaces, 150 days=300 at \$1.25.....	375 00
4 men about bark, slivers, &c., 150 days=600 at \$1.25.	750 00
2 horses, carts and men, 150 days=300 at \$2.....	600 00
2 men, attending to sawdust, spouts, 150 days=300 at \$1.25.....	375 00
Keeping furnaces, &c., in repair.....	300 00
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	\$ 3,547 00
Say 30,000,000 feet of lumber, sawed, at 12c. per M....	3,600 00
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MESSRS. ROSS BROS'. MILL AT BUCKINGHAM.

Cost of furnace.....	\$3,000 00
Wheel and elevating machinery.....	1,000 00
500 feet of double spout for slabs and sawdust, \$1.65....	825 00
70 feet of slab slide, \$1.....	70 00
335 feet of intermediate sized spout, 90c.....	301 50
481 feet of smallest size, 55c.....	264 55
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	\$ 5,461 05
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Annual Cost.

10 per cent on \$5,461.....	\$ 546 00
Say 4 men extra about mills, 150 days=600 at \$1.25..	750 00
Say 2 men at furnace and slide=300 at \$1.25.....	375 00
Tear and wear of furnace, \$150=\$1,821.	
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	\$ 1,671 00
20,000,000 feet at 9c. per M.....	1,800 00
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JAMES McLAREN & Co.'s MILLS, Buckingham.

Cost of furnace.....	\$3,000 00
Wheel and machinery for elevating.....	1,000 00
200 feet of large spout double at \$1.65.....	330 00
515 " medium sized spout at .90.....	463 50
482 " small do .55	265 00
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	\$5,068 50
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Annual Cost.

10 per cent. interest on \$5,068 00.....	\$506 00
Say four men extra about mills 150 days=600 at \$1.25	750 00
Say two men at furnace and slide, 300 at \$1.25.....	376 00
Tear and wear of furnace, \$160.=1,781.....	
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	\$1,631 00
Say fifteen millions at \$0.12.....	1,800 00
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MESSRS. JOHN A. CAMERON & Co.'s MILLS, at North Nation.

Cost of furnace.....	\$3,000 00
Wheel and machinery.....	800 00
700 feet of double spout for slabs and sawdust, at \$1.65	1,155 00
275 " intermediate size for sawdust, 90c.....	247 50
195 " small size, 55c.....	107 25
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	\$5,309 75

Annual Cost.

10 per cent interest on \$5,309.....	\$ 530 00
2 men at mills, extra, 150 days = 300 at \$1.25.....	375 00
" slide and furnace, 300 at \$1.25.....	375 00
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Tear and wear of furnace.....	\$1,280 00
10 million of feet at 14c.....	150 00
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	1,400 00

HAMILTON BROTHERS, HAWKESBURY MILLS.

350 feet of roller carriers for carrying slabs, including water power, flumes, &c.....	\$3,500 00
2 furnaces at \$4,500.....	9,000 00
5 pumps to supply water for carrying sawdust in low water	2,500 00
Iron pipe to carry water 4 inch drain—400 feet at 75c	300 00
do $1\frac{1}{2}$ " " 30c	120 00
do 3 " 50 feet.....	40 00
20 stop cocks.....	50 00
1 " 3 inches.....	10 00
1,300 feet of small spouts at 75c.....	975 00
700 " large " \$1.20.....	840 00
Water tanks and alterations about mills, say.....	1,000 00
Machinery to drive pumps.....	500 00
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	\$18,835 00

Annual Cost.

10 per cent. interest on \$18,835.....	\$1,883 00
Attending to bark, &c., 2 men in each mill, 8 men in all 100 day = 800 days, at \$1.25.....	1,000 00
3 horses, carts, and men 100 days = 300 days, at \$2.00	600 00
2 men on each watch at carriers—400, at \$1.25.....	500 00
2 boys in each mill at sawdust—800, at \$1.00.....	800 00
2 men at spouts and furnaces outside—200.....	250 00
Keeping furnaces in repair, say.....	300 00
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30 million feet sawed per season, at 18c permillion feet	\$5,333 00
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	5,400 00

APPENDIX No. 3.

STATEMENT of Soundings made in the Navigable Channel of the River Ottawa,
between Grenville and Ottawa, May, 1877.

Locality of Soundings.	Depth.	Quality of Material brought up.
	Feet.	

Between Grenville and the Wharf at L'Original	50	Hard, pure clay.
do	do	do
Three and a-half miles from Grenville.....	51	do
Two miles above L'Original	100	Soft clay.
do	95	do
Opposite point above L'Original.....	62	Clay and a little sawdust.
do	62	Pure clay.
Opposite L'Original Lighthouse.....	43	do
Half a mile above do	104	do
do below Major's Wharf.....	160	Bare rock.
Opposite Papineau House.....	66	Pure clay.
At Island above do	82	do
Above Island	70	Clay and small gravel.
do	70	Very hard clay.
do	70	do and large gravel.
do	70	Very hard clay.
Four miles above Montebello.....	57	do
One mile below North Nation River.....	60	Hard clay.
Half a mile do	53	do
Near Island, north side	56	Fine sand, a little sawdust.
Close to River Nation	60	Fine sand, hard bottom.
Opposite do	36	Blue clay, hard and pure.
Above do	36	Red clay.
do do	40	Hard blue clay.
do do	66	do
do do	62	Fine sand.
Two and a half miles below Thurso.....	24	do
Two do do	28	do
Opposite Island do	40	do
Above Island do	48	do
do	48	Coarse sand.
do	48	do
Half a mile below Thurso	43	do
Three miles below Rockland.....	30	do
A little further up do	30	do
do do	40	Fine sand.
do do	48	do
do do	75	do
do do	50	do
Opposite opening to Bay, Rockland.	47	do

Opposite Rockland Mills.....	90	Coarse sand.
A little above do	90	Bare rock.
do do	85	Sand.
Buckingham Wharf.....	38	do
do	40	Sand and little clay.
Opposite River du Lièvre.....	50	Blue clay.
Two miles above River du Lièvre	30	Sand.
Two miles below Blanche Light.....	45	do
Opposite do	30	do
do do	30	do
Opposite River Blanche.....	31	Sand.
Three-quarters of a mile below Green's Creek.	38	do
Near Green's Creek.....	37	do
Near Lighthouse, Green's Creek.....	17	Sand, a little sawdust.
do do	24	Pure sand.
Gill's Wharf.....	23	Sand and a little wood.
Foot of Kettle Island	18	Pure sand.
At Kettle Island.....	34	Pure sand.
Opposite Old Mill, Rockcliff.....	39	Small gravel.
Opposite Rockcliff.....	35	Pure sand.
do close to south shore.....	47	Bare rock.
Above Rockcliff.....	85	do
Opposite Gatineau.....	40	Sand, a little sawdust.
Entrance to Gatineau.....	27	Coarse sand.
do do	27	Fine sand.
Opposite Gatineau, south side.....	80	do
Off point at Keefer's Bay.....	100	Bare rock.
Middle, opposite Keefer's Bay	100	Sand and chips.
Opposite McKay's Bay.....	70	Sawdust and chips.
Opposite McLymont's Mill.....	70	Gravel and shells.
Opposite Rideau Falls.....	60	A little sawdust and rock.
Opposite Mr. Reynolds'.....	60	Gravel, clay, sawdust
Above Mr. Reynolds'.....	60	Sawdust.
Close to Rocky Island, near Batson & Currier's Mill.....	31	New-made sawdust.

The mean height of water in the River Ottawa during the week on which the soundings were taken was 16 feet 4 inches at Grenville, and 13 feet 3 inches at the outlet of the Rideau Canal, as certified by the Lockmaster at both places.

Back of wharf, Grenville.....	20	Sawdust and sand.
Sandbar at Grenville.....	15	Pure sand.
do	12	do
Bay above L'Orignal.....	12 $\frac{1}{2}$	Soft clay.
do do	12	do
do do	12	do
Bay below Lighthouse, L'Orignal	10	Clay.
Bay above Montebello.....	7	Clay, mud, roots of grass.
Close ashore below Nation.....	31	Hard blue clay.
Bay behind wharf, Rockland.....	15	Sawdust and clay.
Behind pier in bay at Rockland.....	23	Slabs and sawdust.
Bay below River du Lièvre	14	Sawdust and fine sand.
400 yards up River du Lièvre.....	16	Very coarse sand.
Bank at Blanche Lighthouse.....	12	Sand.
do do	12	do
do do	12	do

Channels among Islands.....		12	Sand, gravel, clay.
do do		14	Sand.
do do		14	Find sand.
do do very narrow channel		12	do
do do do		21	Pure sand.
Bank near Blanche.....		14	Sand.
South shore, much sawdust floating on water.		10	Clay.
do do		6	Clay, no sawdust on the bottom.
do do		10	do do
do do		8	do do
Close to lower end of Duck Island.....		15	Sand, three pieces of wood.
Nearer to do		15	Pure sand.
Bar at Kettle Island.....		10	do
South side of river Kettle Island.....		8	Blue clay.
North side do and near the channel		15	Sand, sawdust, bark.
do		12	Pure sand.
Eddy below Rockcliff		10	Clay, sawdust.
do		10	Gravel, sawdust, bark, slabs.
Bay opposite Gatineau (Keefer's)		20	Pure sawdust.
do do		45	do
do do		75	do
do on a line with the two points		80	Pure sand.
do 20 feet outside of points.....		80	Sand, a few chips.
Bay, north side above Gatineau		16	Sand and chips.
do do		15	Sand, chips, bark.
McKay's Bay		15	Pure sawdust.
Bay below Gilmour's Mill		20	Stony bottom, clear.
Upper end of wharf do		18	Pure clay.
Queen's Wharf.....		32	Gravel, stones, sawdust, wood.
do		32	Bare rock.
Bay above Queen's Wharf.....		90	Bare rock, floating sawdust.
100 feet from Canal Lock		14	Slabs, sawdust, &c.
200 do		16	do
300 do		35	do
400 do		41	do
Near point below canal		90	Sawdust.
Point above canal		44	Bare rock.
do		60	do
Bay below Mr. Gilmour's		25	do
Upper end Eddy's Docks.....		61	Chips.

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